

CURRICULUM VITAE
EDUARDO F. MORALES

ACADEMIC DEGREES

- Ph.D. in Computer Science. The Turing Institute – University of Strathclyde, Glasgow, U.K., Oct. 1988 – Aug. 1992. Thesis: *First-order induction of patterns in Chess*. Adviser: Dr. Tim Niblett
- M.Sc. in Information Technology: knowledge-based systems. Edinburgh University, Edinburgh, U.K., Oct. 1984 – Sept. 1985. Thesis: *DC: A system that discovers conjectures and analogies*. Adviser: Dr. Alan Bundy.
- B.Sc. in Physics Engineering. Universidad Autónoma Metropolitana – Azcapotzalco, México, D.F., Sept. 1979 – Mar. 1984. Thesis: *Numeric Simulation of MIS solar cells*. Adviser: Dr. Andrej Myszcowski.

Other Languages: English

PROFESSIONAL EXPERIENCE

- April 1st. 2011 – February 29th. 2016.
Head of the Computer Science Department, Instituto Nacional de Astrofísica, Óptica y Electrónica.
- Since Jan. 2006
Professor in Computer Science. National Institute of Astrophysics, Optics and Electronics (*Instituto Nacional de Astrofísica, Óptica y Electrónica*) INAOE.
- Septiembre 2008 – 28 de Noviembre 2012
Head of the Steering Committee of the *National Thematic Network of Information Technology* (Red Temática en Tecnologías de la Información y Comunicación) (RedTIC), CONACYT.
- Jan. 1994 – Dec. 2005
Researcher in Computer Science at the Monterrey's Institute of Technology and Professional Studies (*Instituto Tecnológico y de Estudios Superiores de Monterrey*) (ITESM) – Campus Cuernavaca.
- Jul. 2003 – Dec. 2005
Responsible of the Intelligent Systems' Lab. ITESM - Cuernavaca.
- Jul. 2002 – Jun. 2003
Visiting Professor at the University of New South Wales, Sydney, Australia.

- Oct. 1992 – Jan. 1994
Researcher of the Information System's Division of the Electrical Research Institute (*Instituto de Investigaciones Eléctricas*) IIE.
- April 1989 – Sept. 1990
Technical Consultant of the ESPRIT project 2154, The Machine Learning Toolkit, the Turing Institute, Glasgow, U.K.
- Sept. 1986 – Sept. 1988
Researcher at the Simulation Department of the Electrical Research Institute (*Instituto de Investigaciones Eléctricas*) IIE.
- March 1986 – Aug. 1986
Visiting Researcher, Nuclear Power Division, Electric Power Research Institute (EPRI), Palo Alto, Calif., E.U.A.
- Oct. 1982 – March 1984
Assistant of the Systems' Department at the *Universidad Autónoma Metropolitana* (UAM) – Azcapotzalco.

RESEARCH PROJECTS

Responsible of the following projects:

1. *Automatic transcription of texts* (2018). Technological project sponsored by Nacional Monte de Piedad. (\$435,000.00).
2. Learning objects from Internet to search them with a robot (2016-2019). Research Science Project Conacyt (\$1,058,800.00)
3. Strengthening the Robotics Laboratory (2015). Infrastructure project sponsored by CONACYT (\$3,703,707.00 pesos)
4. Robot Vision for Service Robots (2015). Within the International Collaboration Programme from CONICYT - Chile. Responsible Dr. Javier Ruíz del Solar (Chile). Collaboration project between the *Advanced Mining Technology Center*/University of Chile and the Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE) (\$16,500,000.00 Chilean pesos).
5. MIRADA (2012). Innovation project with ProBayes and CIMAT for face identification in real videos (\$157,095.00 Mexican pesos).
6. National Network on Information Technology (*Red Temática en Tecnologías de la Información y Comunicación (RedTIC)*), CONACYT (2008-2012). (\$10,000,000.00 Mexican pesos).
7. Apprenticeship learning in humanoid robots (2008-2011), sponsored by CONACYT (\$1,340,000.00 Mexican pesos).

8. Data Validation System (2008), sponsored by TAMSA (\$490,000.00 Mexican pesos).
9. On-line models for TTR (2007). Data mining project to put models on a production line, sponsored by Tenaris-Tamsa (\$275,000.00 Mexican pesos).
10. KD Systems in LACO (2006). Data mining project sponsored by Tenaris-Tamsa (\$ 350,000.00 Mexican pesos).
11. KDS Fase 2, in LTR2 (2006). Data mining project sponsored by Tenaris-Tamsa (\$ 300,000.00 Mexican pesos).
12. Gesture Detection for Music Generation (2004). Sponsored by UC-MEXUS, with the collaboration of Prof. David Wessel and Roberto Morales of CNMAT - University of Berkeley (\$ 2,000 USD).
13. Project for Training and Certification of Academic Staff (2005) sponsored by Motorola Foundation (\$ 24,000 USD).
14. KDD in Tenaris-TAMSA (2004). Data mining project sponsored by Tenaris-Tamsa (\$425,000.00 Mexican pesos).
15. Development of a system for automatic acquisition of data from measurement equipment of the drinkable water distribution network at IMTA (2004 - 2005). Sponsored by the *Instituto Mexicano de Tecnología del Agua* (\$316,068.00)
16. Precision agriculture project, Motorola de México, ITESM - Campus Cuernavaca, Campus Monterrey and Campus Querétaro (2004). Donation of two precision agriculture equipments with an estimated cost of \$ 50,000.00 USD.
17. Mobile Robots Project, sponsored by the ITESM (Jul/2003-Dic/2005). \$1,500,000.00 Mexican pesos per year during 3 years.
18. Distributed Relational Reinforcement Learning, Sponsored by CONACyT (2002-2005) \$449,850.00 Mexican pesos.
19. Projects related to the National Network of Research and Development in Computer Science (*Red de Desarrollo e Investigación en Informática*) REDII, sponsored by CONACYT (1998-2000). \$880,000 Mexican pesos per year during 3 years (\$2,640,000.00 Mexican pesos in total).
20. Intelligent Tutoring Systems, as part of the REDII projects (1998).
21. An environment for Knowledge Discovery on Databases. Sponsored by Conacyt (1998–2001). \$470,000.00 Mexican pesos.

22. Automatic production of Electric Power Substations Diagrams. Sponsored by the Mexican Electricity Utility (*Comisión Federal de Electricidad*) CFE (1993).
23. Machine learning tools for predicting insulators faults. Sponsored by the Electric Research Institute (*Instituto de Investigaciones Eléctricas*) IIE (1993).
24. Automatic construction of simulators. Sponsored by the Electric Research Institute (*Instituto de Investigaciones Eléctricas*) IIE – Simulation Department (1988).
25. Automatic loading of a database from an acquisition of data and events' system of an electric power plant. Sponsored by the Mexican Electricity Utility (*Comisión Federal de Electricidad*) CFE (1987).
26. Development tool for Expert Systems (CASCA) and Applications of Artificial Intelligence in the Electric Industry. Sponsored by the Electric Research Institute (*Instituto de Investigaciones Eléctricas*) IIE (1986).

Collaborator in the following projects:

1. Consultant of the project: Development of a project to automatically estimate the value of real state properties. PEI project (PEI/2016/233050) sponsored by Go4it (2017). Patent pending: MX/a/2017/011852.
2. SmartSDK: A FIWARE-based SDK for developing Smart Applications (2016-2018). H2020-ICT-2016-INT (UE) - Conacyt.
3. Member of the Academic-Technical Committee (CTA) of the Thematic Network on Applied Computational Intelligence (ICA), Conacyt (2016).
4. Automatic Video Surveillance: Towards a generic system of intelligent video analysis (ViVA). CONACYT - National Problems (2014-2016).
5. Identification and development of Artificial Intelligence and Mechatronic applications for eolic energy use and generation (*Identificación y desarrollo de aplicaciones de Inteligencia Artificial y Mecatrónica para la generación y uso de energías eólicas*). INAOE-IIE. CEMIE-Elico (2014-2018).
6. Ubiquitous Computing: Ubiquitous health (*Computo Ubicuo: Salud Ubicua*). Conacyt - Redes Temáticas (2013-2014).
7. SICAAV (2013). Innovation project with ProBayes and CIMAT for plate and car identification from videos.
8. UBI-HEALTH: Exchange of Excellence in Ubiquitous Computing Technologies to Address Healthcare Challenges. FP7-PEOPLE-2011-IRSES (2012-2015).

9. Energy prediction in eolic parks and optimization of energy markets using artificial intelligence techniques (*Prediccin de la generacin elctrica en parques elicos y optimizacin de la compra-venta de energa mediante tcnicas de inteligencia artificial*. SENER - Conacyt - BID (2012-2014)
10. Methods and techniques in Artificial Intelligence and Data Mining for supporting the exploitation of mature oil fields. SENER - CONACYT (2011-2013).
11. Visual Grammars. SEP-CONACYT (2009-2012).
12. Dynamic Probabilistic Graphical Models and their Applications (2009-2011). FONCICYT (CONACYT- EU).
13. Integration of visual and textual information for image recovery. CONACYT (2006-2008).
14. Abstraction and Decomposition for Solving Complex Markov Decision Processes. CONACYT (2005-2008).
15. Integration of Logical and Probabilistic Models for Human Tracking and Gesture Recognition for Mobile Robots. In collaboration with the University of Carnegie-Mellon and ITESM - Campus Cuernavaca (1999-2002).
16. Perception and navigation of mobile robots in dynamic environments. CONACYT, ITESM–Morelos (1999-2001).
17. Development of domain independent dialogue models in natural language: a prototype in Spanish in a geometric design domain. NSF-CONACYT in collaboration with the University of Rochester - UNAM - ITESM-Morelos (1998-2001).
18. SICIB: Composition and Improvisation interactive system for dancers. Rockefeller Foundation. In collaboration with the Universidad de Guanajuato, ITESM-Morelos, Carnegie–Mellon Universisty, Stanford University (1998).
19. Multifunctional knowledge-based systems. CONACYT. ITESM – Morelos (1995 – 1998).
20. Database of Machine Learning Applications. European ESPRIT project 2154, The Machine Learning Toolkit. The Turing Institute (1989 – 1990). Technical Consultant.
21. Development of an Expert System Shell for PCs (Small Artificial Reasoning Tool – SMART). Electric Power Research Institute (EPRI) – Nuclear Power Division (1986).

RESEARCH PUBLICATIONS

Journal Articles

1. J. Serrano-Cuevas, E.F. Morales, P. Hernandez-Leal (2019). Safe reinforcement learning using risk mapping by similarity. *Adaptive Behavior*.
2. A.Y. Rodriguez Gonzalez, M. Palacios Alonso, F. Lezama, L. Rodriguez, E. Muoz de Cote, E.F. Morales, L.E. Sucar, D.D. Crockett (2019). A competitive and profitable multi-agent autonomous broker for energy markets. *Sustainable Cities and Society* 49 (2019)
3. J. Herrera-Vega, F. Orihuela-Espina, P.H. Ibargengoytia, U.A. Garca, D. Vila Rosado, E.F. Morales, L.E. Sucar (2018). A local multiscale probabilistic graphical model for data validation and reconstruction, and its application in industry. *Engineering Applications of Artificial Intelligence* 70: 1-15.
4. A.C. Tenorio, E.F. Morales (2017). Automatic Discovery of Concepts and Actions. *Expert Systems with Applications* 92: 192-205.
5. A. Maxhuni, P. Hernandez-Leal, L.E. Sucar, V. Osmani, E.F. Morales, O. Mayora (2016). Stress Modelling and Prediction in Presence of Scarce Data. *Journal of Biomedical Informatics* 63: 344-356.
6. E. Munoz de Cote, E.O. Garcia, E.F. Morales (2016). Transfer Learning by Prototype Generation in Continuous Spaces. *Adaptive Behavior*: 1-15.
7. A.C. Tenorio, E.F. Morales (2016). Automatic discovery of relational concepts by an incremental graph-based representation. *Robotics and Autonomous Systems* 83: 1-14.
8. A. Maxhuni, A. Muoz-Melndez, V. Osmani, H. Perez, O. Mayora, E.F. Morales (2016). Classification of bipolar disorder based on analysis of voice and motor activity of patients. *Pervasive and Mobile Computing* (available on line 29 Enero). DOI: 10.1016/j.pmcj.2016.01.008
9. M. Ramirez-Corona, L.E. Sucar, E.F. Morales (2016). Hierarchical multilabel classification based on path evaluation, *International Journal of Approximate Reasoning* 68: 179-193.
10. H.J. Escalante, M.A. Garca-Limn. A. Morales-Reyes, M. Graff, M. Montesy-Gmez, E.F. Morales, J. Martnez Carranza (2015). Term-Weighting Learning via Genetic Programming for Text Classification. *Knowledge-Based Systems*, pp. 176-189.
11. L.J. Fiedler, L.E. Sucar, E.F. Morales (2015). Transfer Learning for Temporal Nodes Bayesian Networks. *Applied Intelligence* (accepted).

12. E. Omar, E. Muoz de Cote, E.F. Morales (2014). Transfer Learning for Continuous State and Action Spaces. *International Journal of Pattern Recognition and Artificial Intelligence* (IJPRAI) Vol. 28, No. 7.
13. J. Hernndez, L.E. Sucar, E.F. Morales (2014). Multidimensional hierarchical classification. *Expert Systems with Applications* 41 (17): 7671-7677.
14. L.E. Sucar, C. Bielza, E.F. Morales, P. Hernndez-Leal, J.H. Zaragoza, P. Larraaga (2014). Multi-label Classification with Bayesian Network-based Chain Classifiers. *Pattern Recognition Letters* 41: 14-22. ISSN: 0167-8655
15. A.I. Sánchez, E.F. Morales, J.A. González (2013) Synthetic Oversampling of Instances using Clustering. *International Journal on Artificial Intelligence Tools* 22(2): 1-21 Print ISSN: 0218-2130 Online ISSN: 1793-6349
16. P. Hernandez-Leal, A. Rios-Flores, S. Ávila-Rios, G. Reyes-Terán, J.A. Gonzalez, L. Fiedler-Cameras, F. Orihuela-Espina, E.F. Morales, L.E. Sucar (2013). Discovering human immunodeficiency virus mutational pathways using temporal Bayesian Networks. *Artificial Intelligence in Medicine* 57(3): 185-195. ISSN: 0933-3657
17. P. Hernandez-Leal, J.A. Gonzalez, E.F. Morales, L.E. Sucar (2013). Learning Temporal Nodes Bayesian Networks. *International Journal of Approximate Reasoning* 54 (8): 956-977. ISSN: 0888-613X
18. G. Cuaya, A. Muñoz-Meléndez, L. Nuñez Carrera, E.F. Morales, I. Quiñones, A.I. Pérez, A. Alessi (2013). A Dynamic Bayesian Network for Estimating the Risk of Falls from Real Gait Data. *Med Biol Eng Comput* 51(1-2):29-37. ISSN: 0140-0118
19. L. Chang, M.M. Duarte, L.E. Sucar, E.F. Morales (2011). A Bayesian approach for object classification based on clusters of SIFT local features. *Expert Systems with Applications*, 39 (2): 1679-1686. ISSN: 0957-4174
20. J. Hernández, E.F. Morales (2010). Relational Reinforcement Learning with Continuous Actions by Combining Behavioral Cloning and Locally Weighted Regression. *Journal of Intelligent Systems and Applications*, 2:69-79.
21. R. Luis-Velázquez, L.E. Sucar, E.F. Morales (2010). Inductive Transfer for Learning Bayesian Networks. *Machine Learning* 79 (1-2): 227-255.
22. H. Escalante, M. Grubinger, C. Hernández, J. González, A. López, M. Montes, E. Morales, L.E. Sucar, L. Villaseñor, M. Grubinger (2010). The Segmented and Annotated IAPR TC-12 Benchmark, *Computer Vision and Image Understanding* 114(4): 419-428.
23. A. Reyes, L.E. Sucar, E.F. Morales (2009). AsistO: A qualitative MDP-based recommender system for power plant operation. *Computación y Sistemas* 13(1): 5-20.

24. C.E. Mariano, E.F. Morales (2008). Dynamic Behavior of Contaminants in the Water Distribution Network of Cuernavaca Mexico, a Real Application of Multiobjective Distributed Reinforcement Learning. *Computación y Sistemas* (in press).
25. C.E. Mariano-Romero, V.H. Alcocer-Yamanaka, E.F. Morales (2007). Multi-objective Optimization of Water-using Systems. *European Journal of Operational Research* 181(3):1691-1707, ISSN: 0377-2217.
26. S.B. González-Brambila, Eduardo F. Morales (2007). Automatic Generation of Explanations: AGE. *Engineering Applications of Artificial Intelligence* 20(3): 307-323.
27. L. Romero, E.F. Morales, L.E. Sucar (2006). An Exploration and Navigation Approach for Indoor Mobile Robots Considering Sensors' Perceptual Limitations. *International Journal of Advanced Robotics Systems* 3(3):249-258.
28. M. Larre, J. Torres, E. Morales, J. Frausto, S. Torres (2006). MONIL Language, an alternative for data integration. *Computación y Sistemas* 9(3): 203-226 ISSN: 1405-5546
29. C. Mariano, E. Morales. (2005). Diseño de sistemas hidráulicos bajo criterios de optimización de optimización de puntos de pliegue y múltiples criterios. *Revista de Ingeniería Hidráulica en México*. Vol. XX, No. 3, pp. 31-42. ISSN: 0186-4076
30. F. Alarcón-Gálvez, J. González-Herrera, R. Guzmán-Sánchez, E. Morales-Manzanares, C. Montiel-Maldonado, D. Juárez-Romero (2004). Designing Components for Dynamic Process Simulation. *Revista Mexicana de Ingeniería Química*, Vol. 3: 161-175. ISSN: 1665-2738
31. L. Romero, E. Morales, L.E. Sucar (2002). Building Maps for Indoor Mobile Robots Using Ultrasonic and Laser Range Sensors. *Computación y Sistemas*: 10-18. ISSN: 1405-5546
32. R. Morales-Manzanares, E. Morales, R. Dannenberg, J. Berger (2001). SICIB: An Interactive Music Composition System Using Body Movements. *Computer Music Journal* 25(2):25-37. ISSN 0148-9267
33. P.R. de Buen, S. Vadera, E. Morales (1998). A Multi-functional Knowledge Based System to Learn, Apply and Consult Procedures. *Expert Systems with Applications* 15: 265-275. ISSN 0957-4174
34. E. Morales, L.E. Sucar (1988). A Multifunctional Knowledge-Based System for Engineering. *Expert Systems with Applications* 14 (1/2): 17-24. ISSN 0957-4174

35. R. Morales-Manzanares, E. Morales (1997). SICIB: Sistema Interactivo de Composición e Improvisación Musical para Bailarines. *Aportaciones Matemáticas - Serie Comunicaciones* 20: 55-67.
36. E. Sucar, J. Perez-Brito, C. Ruiz-Suarez, E. Morales (1997). Learning Structure from Data and its Application to Ozone Prediction. *Applied Intelligence* 7 (4): 327-338. ISSN 0924-669X
37. E. Morales (1997). PAL: A pattern-based first-order inductive system. *Machine Learning* 26: 227-252. ISSN 0885-6125
38. E. Morales (1996). Learning Playing Strategies in Chess. *Computational Intelligence* 12 (1): 65-87. ISSN 0824-7935
39. E. Morales (1994). Learning Patterns for Playing Strategies. *International Computer Chess Association Journal* 17 (1): 15-26. ISSN 0920-234X
40. R. Morales, E. Morales (1994). Análisis de forma y estilo musicales por inducción utilizando lógica de primer orden. *Aportaciones Matemáticas - Serie Comunicaciones* 14: 437-449.

General Audience and Dissemination Articles

1. C.A. Reyes-Garca, E.F. Morales, H.J. Escalante, A. Torres-Garca (2018). *Aprendizaje e Inteligencia Computacional*. Academia Mexicana de Computacin A.C. L.E. Sucar (editor). AMEXCOMP.
2. E. Morales, C.A. Reyes-Garca, H.J. Escalante, A. Morales (2017). Aprendizaje e Inteligencia Computacional, pgs. 65-90, dentro del libro “La Computacin en Mxico por Especialidades Academicas”, L.A. Pineda (editor). AMEXCOMP. ISBN: 978-607-97357-1-5.
3. L.A. Pineda, L.E. Sucar, F.J. Cantu, E.F. Morales, J.M. Ahuactzin (2016). *Políticas y estrategias para el desarrollo de la Computación en México*. Academia Mexicana de Computacin A.C. (2016). ISBN: 978-607-97357-0-8.
4. Editor (an editorial article) of the special number on Robotics in the journal *Komputer Sapiens* 8(1), Jan-May, 2016.
5. S. Rajsbaum, E. Morales (2016). Editor of the special issue: Norbert Wiener y el origen de la ciberntica. *Ciencia* 67(1): 6-11. Revista de la Academia Mexicana de Ciencias.
6. Editor (an editorial article) of the special number on Robotics in the journal *Komputer Sapiens* 7(3), Sep-Dec, 2015.
7. E. Morales (2013). Educando al niño computacional de Turing. *Ciencia* 64(4): 32-39. Journal of the Mexican Academy of Science.

8. L.E. Sucar, E.F. Morales (2012). Robotnik, trabajador del futuro. *Conversus* 97: 4-6. Revista de divulgación del Instituto Politécnico Nacional.
9. H. Jair Escalante, E.F. Morales (2011). Ver para aprender y aprender a ver: sinergias entre aprendizaje y visión computacionales. *Komputer Sapiens* 2: 15-20
10. E.F. Morales, L.E. Sucar (2009). Los Robots del Futuro y su Importancia para México. *Komputer Sapiens* 1(2): 7-12.
11. S. González-Brambila, E. Morales (2003). Automatic Generation of Explanation of Physical Systems. *Arpakannus* 1/2002: 5-13. Newsletter of the Finnish Artificial Intelligence Society (FAIS), Special Issue on AI and Multimodal Interfaces. Pekka Ala-Siuru and Oscar Mayora-Ibarra (editors).
12. A. Rodríguez, E. Morales (2000). Descubrir Conocimiento en bases de datos: minería de datos y aplicaciones. *Boletín IIE* (24) 2: 75-82.
13. C. Mariano, E. Morales (1999). Aprendizaje por refuerzo en optimización multiobjetivo. *Anuario 1999* del Instituto Mexicano de Tecnología del Agua (IMTA): 7-16.
14. S. González Brambila, E. Morales (1998). La Inteligencia Artificial y la Educación. *RV* (cómputo): 54-60.
15. E. Morales, R. Bañares, A. Villavicencio (1987). Sistemas Expertos en tiempo real y su aplicación al Sector Eléctrico, en *Boletín IIE*, 11(1):9-15, Ene-Feb.

Chapters in Books

1. P. Ibarngoytia, J. Herrera-Vega, U.A. Garca, L.E. Sucar, E.F. Morales (2018). Autoregressive Bayesian Networks for Information Validation and amendment in military applications. Pages 129-150. In *Military Applications of Data Analytics*, Kevin Huggins (editor). CRC Press - Taylor & Francis Group. ISBN-10: 9781498799768, ISBN-13: 978-1498799768.
2. L.E. Sucar, E.F. Morales (2018). Procesos de Decisin de Markov y Aprendizaje por Refuerzo. Captulo 13, pags. 535-588. In *Inteligencia Artificial*, ISBN 9786076226964. Sidorov (editor). Alfaomega Grupo Editor.
3. L.E. Sucar, E.F. Morales, J. Hoey (2011). Introduction. In *Decision Theory Models for Applications in Artificial Intelligence: Concepts and Solutions*, IGI Global, pages 1-8.
4. E.F. Morales, J.H. Zaragoza (2011). An Introduction to Reinforcement Learning. In *Decision Theory Models for Applications in Artificial Intelligence: Concepts and Solutions*, IGI Global, pages 63-80.

5. E.F. Morales, J.H. Zaragoza (2011). Relational Representations and Traces for Efficient Reinforcement Learning. In *Decision Theory Models for Applications in Artificial Intelligence: Concepts and Solutions*, IGI Global, pages 191-218.
6. A.C. Palacios-Garcia, A- Muñoz-Melendez, E.F. Morales (2011). Learning Concepts with Multi-Robot Systems. In *Information in Control, Automation and Robotics*, Lecture Notes in Electrical Engineering (LNEE 89), pp. 253-265, Springer. J.A. Cetto, J.L Ferrier and J. Filipe (Eds.) ISSN 1 876-1100
7. H.H. Avilés-Arriaga, L.E. Sucar, E.F. Morales, B.A. Vargas, E. Corona (2009). Markovito: A Flexible and General Service Robot. In *Computational Intelligence in Autonomous Robotic Systems*, Springer dentro de su serie: Studies in Computational Intelligence Series. D. Liu, L. Wang, K.C. Tan (eds.), pgs. 401–423.
8. E. Morales (2006). Programación Lógica Inductiva (ILP). In *Aprendizaje Automático: conceptos básicos y avanzados. Aspectos prácticos utilizando el software WEKA*. Basilio Sierra Araujo (editor). pg. 201-221. ISBN 13: 9788483223185. Pearson Prentice-Hall.
9. E. Morales (1997). On learning how to play. *Advances in Computer Chess* 8, H.J. van den Herik y J.W.H.M. Uiterwijk (eds), Universiteit Maastricht, The Netherlands, pp. 235-250.
10. E. Morales (1992). Learning Chess patterns, en S. Muggleton (editor), *Inductive Logic Programming*, Academic Press, pp 517-537.
11. E. Morales, H. García (1990). A modular approach to multiple fault diagnosis, in M. Mavrounioutis (editor), *Artificial Intelligence in Process Engineering*, Academic Press, pp. 161-187.

Book Editor

1. L.E. Sucar, E. Morales, J. Hoey (Eds.) (2011). *Decision Theory Models for Applications in Artificial Intelligence: Concepts and Solutions*, IGI Global Publishing Company. DOI: 10.4018/978-1-60960-165-2, ISBN13: 9781609601652, ISBN10: 1609601653, EISBN13: 9781609601676.
2. L.E. Sucar, E. Morales, J. Hoey (Eds.) (2011). *Decision Theory Models for Applications in Artificial Intelligence: Concepts and Solutions*, IGI Global Publishing Company. DOI: 10.4018/978-1-60960-165-2, ISBN13: 9781609601652, ISBN10: 1609601653, EISBN13: 9781609601676.
3. A. Gelbukh, E. Morales (2008). *MICAI 2008: Advances in Artificial Intelligence*, Springer: Lecture Notes in Artificial Intelligence Series, Volume 5317. ISBN: 978-3-540-88635-8

4. A. Gelbukh, E. Morales (2008). *Proceedings of the Special Session of the Seventh Mexican International Conference on Artificial Intelligence*, IEEE Computer Society Press. ISBN: 978-0-7695-3441-1
5. E. Morales, C. Zozaya (1997). Proceedings of the Machine Learning workshop within the *Primer Encuentro de Computación (ENC97)*, Queretaro, Qro.
6. L.E. Sucar, E. Morales (1995). *Proceedings of the XII Reunión Nacional de Inteligencia Artificial*, Noriega editores, ISBN: 968-18-5309-1.

Technical Reports

1. Jonahan Serrano, Eduardo Morales (2016). Reinforcement learning considering risk and budget. Technical Report, Coordinación de Ciencias Computacionales, INAOE.
2. Ana C. Tenorio, Eduardo F. Morales (2013). Automatic Discovery of Concepts for Dynamic Domains. Technical Report **CCC-13-002**, Coordinación de Ciencias Computacionales, INAOE.
3. G. Cuaya-Simbro, A. Muñoz-Meléndez, E.F. Morales (2010). Detección Automática de habilidades motrices en la marcha de las personas. Technical Report **CC-10-003**, Computer Science Department, INAOE.
4. H. Jair Escalante, C.A. Hernández, J.A. González, A. López, M. Montes, E. Morales, E. Sucar, L. Villaseñor (2008). Segmenting and annotating the IAPR-TC12 benchmark. Technical Report **CC-08-005**, Computer Science Department, INAOE.
5. E. Morales (1992). Learning patterns for playing in Chess, *Turing Institute Research Memoranda TIRM-92-052*, The Turing Institute, Glasgow, Scotland.
6. E. Morales (1990). Some experiments with Macro-operators in the 8-puzzle, *Turing Institute Research Memoranda, TIRM-90-042*, The Turing Institute, Glasgow, Scotland.
7. E. Morales (1990). The Machine Learning Toolkit Database, Proyecto ESPRIT-2154, **TI-MLT-5.5**. The Turing Institute, Glasgow, Scotland.
8. E. Morales (1989). Inductive learning of first-order Horn clauses, *Turing Institute Research Memoranda, TIRM-89-038*. The Turing Institute, Glasgow, Scotland.

International Conference Papers

1. R. Oves Garca, E.F. Morales, L.E. Sucar (2019). A novel scheme for training two-stream CNNs for action recognition. In Proc. of the Iberoamerican Congress on Pattern Recognition (CIARP). LNCS 11896, pgs. 729-739. Springer.

2. S. Salazar-Colores, A. Mndez-Molina, D. Carrillo-Lpez, E. Escobar-Jurez, E.F. Morales, L.E. Sucar (2019). A fast and robust deep learning approach for hand object grasping confirmation. In Proc. Mexican International Conference on Artificial Intelligence (MICAI), LNAI 11835, pgs. 601-612. Springer-Verlag (best student paper award).
3. J. Madrid, H. Jair Escalante, E. Morales (2019). Meta-learning of textual representations. In ECML/PKDD Workshop of Automatic Data Science (ADS).
4. A.L. Oa, L.E. Sucar, E.F. Morales (2018). Distributed Probabilistic Model for sensor validation in combinatorial logic circuit. In Proc. 16th. Ibero-American Conference on Artificial Intelligence (IBERAMIA), pgs. 42-53. Lecture Notes in Computer Science (LNCS), volumen 11238. G.R. Simari, E. Ferm, F. Gutierrez Segura, J.A. Rodrguez Melquiades (editores), Springer.
5. E. Prez Costa, L. Villaseor-Pineda, E. Morales, H.J. Escalante (2018). Recognition of Apparent Personality Traits from Text and Handwritten Images. Revised selected papers from the workshops of the International Conference on Pattern Recognition (ICPR). Pattern Recognition and Information Forensics, Lecture Notes in Computer Science (LNCS), vol. 11188, pp. 1-7. Z. Zhang, D. Suter, Y. Tian, A. Branzan Albvu, N. Sidere, H. Jair Escalante (editores). Springer.
6. D. Lpez, H.J. Escalante, L. Villaseor-Pineda, E. Morales, M. Montesy-Gmez (2018). Predicting academic challenge success from competition proposals. 23rd. Iberoamerican Congress on Pattern Recognition (CIARP). LNCS.
7. J. Serrano-Cuevas, E.F. Morales, P. Hernandez-Leal, D. Bloembergen, M. Kaisers (2018). Learning on a budget using distributional RL. Workshop on International Conference on Autonomous Agents and Multiagent Systems (AAMAS-2018).
8. R. Benitez Jimenez, E.F. Morales, H.J. Escalante (2018). Bayesian Chain Classifier with Feature Selection for Multi-label Classification. In Proc. 17th. Mexican International Conference on Artificial Intelligence (MICAI). Lecture Notes in Artificial Intelligence (LNAI), vol. 11288. I. Batyshin, M.L. Martinez-Villaseor, H.E. Ponce Espinosa (editores).
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10. V. Lobato-Rios, A.C. Tenorio-Gonzalez, E.F. Morales (2018). Fast Learning for Accurate Object Recognition Using a Pre-trained Deep Neural Network. In Proc. of the Mexican International de Inteligencia Artificial (MICAI). LNAI - 10632, Springer.
11. J. Serrano Cuevas, E. Morales Manzanares (2017). An exploration strategy for RL with considerations of budget and risk. In Proc. of the 9th. Mexican Conference on Pattern Recognition (MCPR). J.A. Carrasco-Ochoa, J.F. Martnez-Trinidad, J.A. Olvera-Lpez (eds.). Lecture Notes in Computer Science (LNCS), 10267, Springer.
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16. P. Hernández-Leal, A. Maxhuni, L.E. Sucar, V. Osmani, E.F. Morales, O. Mayora (2015). Stress Modelling Using Transfer Learning in Presence of Scarce Data. In *Proc. of the International Conference on Ambient Intelligence for Health (AmIHEALTH)*, pp. 224-236. Lecture Notes in Computer Science (LNCS-9456), Springer.
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International Workshop and Low Ranked Conference Papers

1. G. Cuaya-Simbo, E. Ruiz, A. Muoz-Melndez, E.F. Morales (2017). Analisis de readmision hospitalaria de pacientes diabeticos mediante aprendizaje computacional. *Research in Computing Science* 138: 147-157.
2. L. Pellegrin, H.J. Escalante, A. Morales, E.F. Morales, C.A. Reyes-Garca (2017). Overview of the 2017 RedICA Text-Image Matching (RICATIM) Challenge. In Proc. of the IEEE International Autumn Meeting on Power, Electronics and Computing (ROPEC).
3. A.C. Tenorio-González, E.F. Morales (2016). ADC: Concept Discovery and Learning of Actions for Unknown Environments. *Abstraction in Reinforcement Learning Workshop of the International Conference on Machine Learning (ICML)*.
4. R. Izquierdo-Cordova, E.F. Morales, L.E. Sucar (2016). Object Location Estimation in Domestic Environments through Internet Queries. *Workshop on Autonomous Mobile Service Robots at International Joint Conference on Artificial Intelligence (IJCAI)*.
5. L.A. Len, A.C. Tenorio, E.F. Morales (2013). Human Interaction for Effective Reinforcement Learning. *Workshop on Reinforcement Learning with Generalized Feedback as part of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD 2013)*. <http://www.ecmlpkdd2013.org/reinforcement-learning-with-generalized-feedback-beyond-numeric-rewards/>
6. J. Herrera-Vega, F. Orihuela-Espina, E.F. Morales, L.E. Sucar (2012). A framework for oil well production data validation. *Operatios Research and Data Mining workshop (ORADM)*.
7. J. Ruiz, L. Altamirano, E.F. Morales, A. León, J. González (2011). Automatic Recognition of Human Activities under Variable Lighting. *Advances in Soft Computing Algorithms I*. Batyrshin, G. Sidorov (eds.), 3-14.
8. E. Corona-Xelhuanzi, E.F. Morales, L.E. Sucar (2010). Solving Policy Conflicts in Concurrent Markov Decision Processes. In *ICAPS-2010 Workshop on Planning and Scheduling Under Uncertainty*.
9. H.J. Escalante, J.A. González, C.A. Hernández, A. López, M. Montes, E. Morales, L.E. Sucar, and Luis Villaseñor (2008). TIA-INAOE'S participation at ImageClef 2008. In *Working Notes of the CLEF Workshop, Aarhus, Denmark*. CLEF.
10. A. Ramírez, L.E. Sucar, E. Morales, E. Damian (2008). Ambientes de aprendizaje en robots de servicio. M.G. Medina Barrera, J.F. Ramírez Cruz, J.H. Sossa Azuela (eds.). *Research in Computer Science* 38: 55-64. Special Issue on: Advances in Intelligent and Information Technologies.

11. E- López-Damian, A. Ramírez, J. Sánchez, C. Cruz, B. Vargas, E. Corona, E. Morales, E. Sucar (2008). Towards a service robot: experiments with Markovito. In *Proc. of Service Robots Workshop - MICAI-08*. Artificial Intelligence for Humans: Service Robots and Social Modelling, pp. 15-26.
12. H. Avilés, E. Corona, A. Ramírez, B. Vargas, J. Sánchez, L.E. Sucar, E.F. Morales (2007). A Service Robot Named Markovito. *IEEE Latin American Robotic Symposium / IX Congreso Mexicano de Robotica (4th IEEE LARS 07 / IX COMRob 07)*, Monterrey N. L. Mexico on November 7-9, 2007.
13. R.M. Ortega-Mendoza, E. Villatoro-Tello, L. Villaseñor-Pineda, M. Montesy-Gómez and E.F. Morales (2007). On the Use of Dynamic Information for Speaker Identification. In *Proc. of the 8th. Conference on Computing CORE-2007*.
14. H.M. Marín-Castro, L.E. Sucar, E.F. Morales (2007). Etiquetado Automático de Imágenes Digitales. Primer Encuentro de Estudiantes en Ciencias de la Computación. (E²C²).
15. L.E. Sucar, E. Morales (2007). A General Framework for Developing Service Robots. In *Proc. of the 8th. IFAC Symposium on Cost Automation Systems*.
16. M. Mejía-Lavalle, E.F. Morales, G. Rodríguez (2006). Fast Feature Selection Method for Continuous Attributes with Nominal Class. In *Proc. of the Fifth International Conference on Artificial Intelligence (Special Session)*, pg. 142-150. IEEE Computer Society.
17. A. Reyes, P. Ibarguengoytia, L.E. Sucar, E. Morales (2006). Abstraction and Refinement for Solving Continuous Markov Decision Processes. In *Proc. of the The third European Workshop on Probabilistic Graphical Models (PGM-06)*, pp. 263–270.
18. M. Mejia-Lavalle, E.F. Morales (2006) Feature Selection Considering Attribute Inter-dependencies. In *Proc. of the International Workshop on Feature Selection for Data Mining: Interfacing Machine Learning and Statistics (SIAM Conference on Data Mining)*, pp. 50-58.
19. J.A. Méndez-Polanco, E.A. Camargo, A. Muñoz-Meléndez, E. Morales (2006). Diseño y Construcción de un Robot Ápodo. En *Avances en la Ciencia de la Computación (ENC-06)*, pp. 330-335, SMCC, Hernández Aguirre, A., Zechinelli Martini J.L. (eds.) ISBN 968-5733-06-6
20. S. Torres-Ovalle, J. Esquivel-Cardenas, J. Torres-Jimenez, E. Morales-Manzanares. Genetic programming: a new linear approach. In *Proc. of the 8th. IASTED International Conference on Intelligent Systems and Control (ISC-2005)*.

21. E. Morales (2004). Relational State Abstractions for Reinforcement Learning. In *Proc. of the Workshop on Relational Reinforcement Learning of the Twenty-First International Conference on Machine Learning (ICML-04)*, pp. 27-32.
22. A. Estrada, E.F. Morales (2004). NSC: A New Progressive Sampling Algorithm. In *Proc. of the Workshop: Machine Learning for Scientific Data Analysis of Iberamia-2004*, pp. 335-344.
23. A. Reyes, L.E. Sucar, E. Morales, P. Iburgüengoytia (2003). Relational MDPs using qualitative proportionality predicates. In *Proc. of NIPS-03: Workshop on Planning for the Real World*.
24. C. E. Mariano-Romero, V. E. Alcocer-Yamanaka E. F. Morales (2003). Design of water using Systems through a Multiobjective Approach Proceedings of the GECCO 2003, International Workshop on Learning classifier Systems (IWLCS 2003). pp. 186-189
25. S. González-Brambila, E. Morales (2003). Explaining how engineering devices work with AGE. In *Proc. of the 17th. International Workshop on Qualitative Reasoning (QR-03)*, pp. 103-110. Paulo Salles and Bert Bredeweg (editors).
26. S. González-Brambila, E. Morales (2003). Subsystem reduction for qualitative simulation. In *Proc. of the 17th. International Workshop on Qualitative Reasoning (QR-03)*, pp. 95-101. Paulo Salles and Bert Bredeweg (editors).
27. E. Morales (2003). Scaling up reinforcement learning with a relational representation. In *Proc. of the Workshop on Adaptability in Multi-agent Systems (AORC-2003)*, pp. 15-26.
28. M. Larre, J. Torres, E. Morales, S. Torres (2002). MONIL The Metadata and Object Integration Language. In *Proc. of the 2nd. International Conference on Information Science and Applications*, Alexander Zemliak and Nikos E. Mastorakis (editors).
29. R. Morales-Manzanares, E. Morales, L.E. Sucar (2002). Modelling music with bayesian networks and logic programs. In *Proc. of the International Symposium of Musical Acoustics (ISMA-2002)*.
30. E. Morales, S. González (2002). Generation of explanations of chemical proceses. In *Proc. of the Second IASTED Artificial Intelligence and Applications (AIA-2002)*, pp. 110-115.
31. M. Larre, J. Torres, E. Morales, S. Torres (2002). Data Integration using the MONIL Language. In *Proc. of the 4th. International Conference on Enterprise Information Systems (ICEIS-2002)*. Publisher ICEIS Press

32. G. Gómez, E. Morales (2002). Automatic feature construction and a simple rule induction algorithm for skin detection. In *Proc. of the ICML workshop on Machine Learning in Computer Vision*, A. Sowmya, T. Zrímeç (eds.), pp. 31-38.
33. S. González, E. Morales (2002). Generation of Explanations of Chemical Processes: a demo. In *Proc. del XI Congreso Internacional de Computación, Avances en Ciencias de la Computación e Ingeniería de Cómputo (CIC-2002)*, Vol. II, pp. 333-342.
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36. S. González-Brambila, E. Morales (2001). Generation of Explanations of Dynamic Systems. In *Proc. del Encuentro Internacional de Ciencias de la Computación (ENC-01)*, pp. 63-72.
37. C. Zozaya-Gorostiza, C. Galindo. E. Morales (2001). Valuation of American Put Options by Q-learning. In *Proc. del Encuentro Internacional de Ciencias de la Computación (ENC-01)*, pp. 241-250.
38. M. Larre, J. Torres, E. Morales (2001). Data Integration with MONIL, Metadata and Correspondence Suggestions. In *Proc. del Encuentro Internacional de Ciencias de la Computación (ENC-01)*, pp. 623-632.
39. E. Morales, G. Gómez, L.E. Sucar (2001). ADEX: Ambiente de Descubrimiento EXtensible. In *Proc. del Tercer Taller Internacional de Minería de Datos*.
40. J. Frausto-Solis, R. Rivera-López, F. Ramos-Quintana, E.F. Morales (2001). Fast Hard Linear problem resolution using simulated annealing and Dantzig's rule. In *Proceedings of the IASTED International Conference*, pp., 272-276.
41. C. Mariano, E. Morales (2000). MDQL: A Reinforcement Learning Approach for the Solution of Multiple Objective Optimization Problems. In *Proc. of Multiobjective Problem Solving from Nature Workshop (MPSN)*.
42. H. Domínguez, E. Morales, L.E. Sucar (2000). A Bi-directional approach for learning Bayesian networks and its application to ozone prediction. In *European Conference on Artificial Intelligence Workshop: Bayesian and Causal Networks: from data inference to data mining*.

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44. P. Ibargüengoytia, L.E. Sucar, E. Morales (2000). A probabilistic model-based approach for fault diagnosis. In *Proc. of Model-Based Diagnosis (DX-00)*, pp. 79-86.
45. M. Larre, S. Torres, J. Torres, E. Morales (2000). Un Algoritmo para Integración de Datos basado en el Descubrimiento de Relaciones. In *Proc. del VII Congreso Internacional de Investigación en Ciencias Computacionales (CIIC-2000)*, pp. 263-274.
46. C. Mariano, E. Morales (1999). MOAQ a Distributed Reinforcement Learning Algorithm for the Solution of Multiple Objectives Optimization Problems. In *Proc. del Segundo Encuentro Nacional de Computación (ENC-99)*.
47. R. Ferreira, E. Morales (1999). Aprendizaje de reglas de control en robots móviles. In *Proc. del Segundo Encuentro Nacional de Computación (ENC-99)*.
48. L. Romero, E. Morales (1999). Uso de una red neuronal para la fusión de lecturas de sonares en robots móviles. In *Proc. del Segundo Encuentro Nacional de Computación (ENC-99)*.
49. L.E. Sucar, E. Morales (1999). Integrating bayesian networks with logic programs. In *Proc. of the IJCAI Workshop on Reasoning with Uncertainty in Robot Navigation*, pp. 73.
50. C.E. Mariano, E. Morales (1998). A Multiple objective Ant-Q algorithm for the design of water distribution irrigation networks. In *Proc. of Ants-98 Workshop*.
51. L.E. Sucar, E. Morales (1998). MF-KBS A Multifunctional Knowledge-based System for Engineering Domains. In *Proc. of the NSF Design and Manufacturing Grantees Conference*, pp. 791-792.
52. E. Morales, M. Rodríguez (1998). Learning and Merging Logic Programs. In *Proc. del Taller de Inteligencia Artificial (TANIA-98)*, pp. 266-274.
53. S. González-Brambila, E. Morales (1998). Automatic Generation of Functional Explanations. In *Proc. of the European Conference on Artificial Intelligence Workshop: Model based reasoning for intelligent education environments*, pp. 58-83.
54. R. Morales-Manzanares, E. Morales (1997). Music Composition, Improvisation, and Performance Through Body Movements. In *Proc. of the AIMI International Workshop; KANSEI: The technology of emotions*, pp. 92-98.

55. P. de Buen, S. Vadera, E. Morales (1997). Machine Learning in LacePro Multi-Functional Framework. In *Proc. of the Sixth International Conference on User Modeling: Workshop on Machine Learning on User Modeling*.
56. P. de Buen, S. Vadera, E. Morales (1997). User Modelling in LacePro Multi-Functional Framework. In *Proc. of the Sixth International Conference on User Modeling: Workshop on Embedding User Models in Intelligent Applications*.
57. E. Morales (1997). Aprendiendo a jugar ajedrez. In *Proc. del Simposium Internacional en Computación, CIC-IPN*, pp. 87-95.
58. V. Hernández, G. Rodríguez, E. Morales (1996). Descubrimiento de Información en una Base de Datos de Generación Eléctrica. In *Proc. de la Novena Reunión de Verano de Potencia (RVP-96)*, IEEE Sección México, pp. 31-37.
59. I. Parra, E. Morales (1995). Diagnóstico de Sistemas Físicos a través de un Mecanismo de Propagación de Restricciones. In *Proc. de la XII Reunión Nacional de Inteligencia Artificial (RNIA-95)*, pp. 114-120, Ed. Noriega.
60. E. Morales, R. Morales (1995). Learning Musical Rules. In *Proc. of the IJCAI-95 Workshop: Artificial Intelligence and Music*, Montreal, Canadá, pp. 81-85.
61. A. Rios, E. Morales (1994). Mejoramiento de Sistemas Clasificatorios Genéticos induciendo poblaciones iniciales. In *Proc. de la XI Reunión Nacional de Inteligencia Artificial*, pp. 85-95, Guadalajara, Jalisco, México.
62. E. Morales, R. Morales-Manzanares (1994). Learning Counterpoint rules for analysis and generation. In *Proc. of the First Brazilian Symposium on Computer Music*, Brasil.
63. R. Morales, E. Morales (1993). Análisis de forma y estilo musical por inducción utilizando lógica de primer orden. In *Proc. del XXVI Congreso Nacional de la Sociedad Matemática Mexicana*, Morelia, Mich.
64. E. Morales (1993). PAL: un sistema de aprendizaje en lógica de primer orden, In *Proc. de la X Reunión Nacional de Inteligencia Artificial*, México, D.F.
65. E. Morales (1992). Learning patterns for playing KRK. In *Proc. of the ECAI-92 Workshop: Logical Approaches to Machine Learning*, Viena.
66. E. Morales (1992). Testing the applicability of ILP systems. In *Proc. of the Second International Workshop on Inductive Logic Programming (ILP-92)*, ICOT Technical Memorandum TM-1182, S. Muggleton y K. Furukawa (editores), Tokio, Japón.

67. E. Morales (1991). Learning Chess patterns. In *Proc. of the International Workshop on Inductive Logic Programming (ILP-91)*, pp. 291-307, Viana de Costelo, Portugal.
68. E. Morales, H. García (1988). Multiple fault diagnosis based on physical models. In *Proc. of the AAAI-88 Workshop: Artificial Intelligence in Process Engineering*, Minnesota, U.S.A, 1988.
69. E. Morales, H. García (1988). Diagnóstico de fallas múltiples basado en modelos físicos. In *Proc. de la V Reunión Nacional de Inteligencia Artificial*, Mérida, Yucatán, México.
70. R. Bañares, E. Morales (1988). Dos herramientas basadas en técnicas de inteligencia artificial para el auxilio de la construcción de simuladores de proceso, In *Proc. de la V Reunión Nacional de Inteligencia Artificial*, Mérida, Yucatán, México.
71. R. Bañares, E. Morales (1987). Herramientas de apoyo basadas en técnicas usadas en la construcción de Sistemas Expertos para la manipulación de diagramas de flujo. In *Proc. del Curso Internacional de Sistemas Expertos*, CINVESTAV, México.
72. R. Bañares, S. Villareal, E. Morales (1987). Sistemas Expertos como auxiliares en la manipulación de diagramas de flujo. In *Proc. de la Reunión Nacional del IMIQ*, Guerrero, México.
73. E. Morales (1987). Tópicos para desarrollo de un ambiente híbrido (e integrado) para desarrollo de Sistemas Expertos. In *Proc. de la IV Reunión Nacional de Inteligencia Artificial*, Puebla, México.
74. R. Bañares, E. Morales (1987). Sistemas Expertos en tiempo real en el IIE. In *Proc. del Taller de Trabajo sobre Sistemas Expertos*, Sociedad Mexicana de Ingeniería, México.
75. E. Morales (1987). DC: un sistema que descubre conjeturas y analogías. In *Proc. de la III Reunión Nacional de Inteligencia Artificial*, Oaxaca, México.

Newspaper Articles

- E. Morales. 15/9/08. A qué le estamos apostando? *La Jornada de Oriente*, suplemento @rroba.
- E. Morales, L.E. Sucar. 21/4/08. México debe de invertir en Robtos de Servicio. *La Jornada de Oriente*, suplemento @rroba.
- E. Morales. 11/3/08. Buscando una aguja de conocimiento en un pajar de datos. *La Jornada de Oriente*, suplemento @rroba.

Patents

- International patent. International publication number: WO 2019/053632 AI. Ttulo: Method for producing a catalogue of property appraisal. Date of publication: 21st. of march, 2019.
- National patent number: MX/a/2017/011852. Clasificacin CIP: G06Q 50/08 (2012.01), Clasificacin CPC: G06Q 50/08 (2016.08). Ttulo: Mtodo para obtener un catlogo de fichas de avalos inmobiliarios. Ficha SIGA: 7644173. Fecha de Puesta en Circulacin: 2018-04-05.

DISTINCTIONS

- Member of the National Researcher’s System (SNI), Level III, 2020-2024.
- Fellow of the Mexican Society of Artificial Intelligence (SMIA), October 25th., 2018.
- Member of the Review Comission of SNI, Area VII - 2018.
- Member of the committee of Basic Research Projects from CONACyT 2017-2018.
- Member of the External Evaluation Comission of Centro de Investigacin en Matemticas, A.C. (CIMAT), 2018.
- Member of the Evaluation Committee of “Proyectos de Ciencia, Tecnología e Innovación y su contribución a los retos del país” (2016). COL-CIENCIAS - Colombia.
- Member of the Evaluation Committee of Area VII of the National Researchers System (SNI) 2015-2017.
- Member of the Evaluation Committee for projects between Mexico and the University of California (UC-MEXUS), 2015.
- *Distinguished Graduate* from the Universidad Autnoma Metropolitana, 25th. of Februray, 2015.
- Founding member of the *Academia Mexicana de Computacin*, 2015.
- Member of the National Researchers System (SNI) Level III, 2015-2019.
- Invitation to the Microsoft Research Latin American Faculty Summit, 7-9 March, 2014, Santiago de Chile.
- Invitation to the Workshop ALCUE NET - Latin American, Caribbean and European Union Thematic Workshop on Information and Communication Technologies, 19-20 march, 2014, Santiago de Chile
- Member of the Evaluation Comission of grants from Research in Social Development, CONACYT-SEDESOL, 2013.

- Invited to participate in the forum *Aprovechando el Conocimiento para Resolver los Problemas Nacionales*. Foro Consultivo Científico y Tecnológico, A.C. 19 de julio de 2013, Cd. de Mex.
- Member of the Editorial Board of the *International Journal of Applied Intelligence* (ISSN: 0924-669X)
- Member of the Editorial Board of the *Transactions on Machine Learning and Data Mining* (ISSN: 1865-6781).
- Associate Editor of “Inteligencia Artificial” Journal - Revista Iberoamericana de IA. (ISSN: 1988-3064).
- Member of the Editorial Board of *Komputer Sapiens* (ISSN: 2007-0691).
- Member of the National Researchers Systems (Mexico) - Level II, (SNI), 2007-2014.
- Member of the National Academy of Sciences - Mexico (AMC), 29 de octubre de 2012.
- Member of the Mexican Academy of Informatics - Mexico (AMIAC), 2011.
- Invited to the CEBIT fair on ITC by the German Ministry of Education and Research (BMBF), February 28th. - March 5th. 2011.
- Invited by the Department of State (USA) within the *International Visitor Leadership Program*, to seek collaboration agreements between Mexican & US researchers (2010).
- Member of the Accreditation of Reviewers Committee in Engineering - CONACYT (2010-2012)
- Member of the External Evaluation Committee of the Center of Research in Mathematics (Centro de Investigación en Matemáticas, A.C. (CIMAT)) (2010-2012).
- Member of the National Researchers System (SNI), Level 2. (2007-2011).
- Coordinator of the steering committee of the Thematic Network on Information and Communication Technology (Red TIC - CONACYT) with 150 members of different research centers and universities in the country.
- Global recognition to academic performance (*Reconocimiento Global a la Labor Docente* - 2004. ITESM - Campus Cuernavaca, May 13th., 2005.
- Member of the National Researcher System (SNI) Level 1: 1994-2007, Candidate: 1987-1988, 1992-1994.
- ACM Main Speaker 2002 (*Conferenciante Estelar de la ACM* 2002), May 9th., 2003.

- Distinguished Engineer (*Ingeniero Distinguido*), IEEE - Morelos Section, 2002.
- Distinguished Speaker of the Association for Computing Machinery (ACM) for Central and South-America, since 1999.
- Member of the Technical Committee of the National Evaluation Center (*Centro Nacional de Evaluación*) CENEVAL in the area of Informatics and Computer Science (1998-2005).
- Member of the Academic Committee of the National Evaluation Center (*Centro Nacional de Evaluación*) CENEVAL in the area of Computer Graphics, Artificial Intelligence and Human-Computer Interaction (1998-2005).
- Member of the Permanent Technical Committee of ANICC (*Academia Nacional de Investigación en Ciencias Computacionales*), Jan. 1998 - Dec. 2000.
- Scholarships for Master (1984-1985) and Ph.D. degrees (1988-1992) and for a Sabbatical stay (2002-2003).
- Complementary scholarship of the British Council for the Master's Degree (1984-1985). and from *Banco de México* for Ph.D. studies (1991-1992).

ACADEMIC EXPERIENCE

SUPERVISED THESES

Ph.D.:

1. Jonathan Serrano Cuevas. *Reinforcement Learning with Considerations of Budget and Risk*. Ph.D. in Computer Science, INAOE (26/6/19).
2. Ana Cecilia Tenorio Gonzalez. *Automatic Discovery of Concepts for Unknown Environments*. PhD in Computer Science, INAOE (28/6/16).
3. Esteban Omar García Rodríguez. *Aprendizaje por refuerzo mediante transferencia de conocimiento cualitativo*. PhD in Computer Science, INAOE. Supervised with Dr. Enrique Muñoz de Cote (23/2/15).
4. German Cuaya Simbro. Automatic construction of a prediction model from imbalanced datasets *Construcción Automática de un Modelo de Predicción a partir del Análisis de Datos Desbalanceados*. Co-supervised with Dr. Angélica Muñoz Meléndez. PhD in Computer Science, INAOE (07/05/13).
5. Blanca Vargas Govea. Learning of Teleo-Reactive Programs for Mobile Robots (*Aprendizaje de Programas Teleo-Reactivos para Robótica Móvil*). PhD in Computer Science, INAOE (28/10/09).

6. Manuel Mejía-Lavalle. Feature Selection Considering Attributes' Interdependencies (*Selección de atributos considerando inter-dependencias*). Co-Supervised with Dr. Guillermo Rodríguez. Ph.D. Programme in Computer Science, ITESM - Cuernavaca (7/3/07).
7. Alberto Reyes Ballesteros. Representation and Learning of Qualitative Markov Decision Processes (*Representación y Aprendizaje de Procesos de Decisión de Markov Cualitativos*). Co-supervised with Dr. L. Enrique Sucar and Dr. Pablo Ibarguengoytia). Ph.D. Programme in Computer Science, ITESM - Cuernavaca (27/11/2006).
8. Socrates Torres Ovalle. DEECC Methodology for Transforming a Document's Collection into a Datawarehouse (*Metodología DEECC para Transformar una Colección de Documentos no Estructurados en una Bodega de Metadatos Documentales*). Co-supervised with Dr. J. Torres). Ph.D. Programme in Computer Science, ITESM - Cuernavaca (03/11/2005).
9. Silvia González Brambila. Functional Explanation of Physical Systems from Qualitative Models. (*Explicación de Funcionamiento de Sistemas Físicos a partir de Modelos Cualitativos*). Ph.D. in Computer Science, ITESM - Morelos (25/1/2003).
10. Mónica Larre Bolaños Cacho. MONIL a data integration language. (*MONIL un lenguaje para la integración de datos*). Co-supervised with Dr. José Torres. Ph.D. in Computer Science, ITESM - Morelos (15/11/2002).
11. Leonardo Romero. Map building and localization of Mobile Robots: a probabilistic approach. (*Construcción de Mapas y Localización de Robots Móviles: un enfoque probabilista*) (co-supervised with Dr. L. Enrique Sucar). Ph.D. in Computer Science, ITESM - Morelos (21/11/2001).
12. Carlos Mariano. Reinforcement Learning in multi-objective optimization problems. (*Aprendizaje por Refuerzo en Optimización Multiobjetivo*). Ph.D. in Computer Science, ITESM - Morelos (2/3/2001).
13. Javier Nava. Intentional Model for Argumentative text retrieval. (*Modelo Intencional para Recuperación de Textos Argumentativo*). (co-supervised with Dr. Fernando Ramos), Ph.D. in Computer Science, ITESM - Morelos (13/8/1999).
14. Víctor de la Cueva. A cooperative genetic algorithm for collision free trajectories of cooperative robots. (*Un algoritmo genético cooperante para el cálculo de trayectorias libres de colisiones con robots cooperantes*). (co-supervised with Dr. Fernando Ramos). Ph.D. in Computer Science, ITESM - Morelos (21/5/1998).
15. Pablo de Buen. *An Adaptive Multi-functional framework to learn, apply and consult procedures* (co-supervised with Dr. Sunil Vadera). Ph.D. in Computer Science, Salford University (7/1998).

16. José Torres. Minimization of the band-width of a graph using an genetic algorithm. (*Minimización del Ancho de Banda de un Grafo Usando un Algoritmo Genético*) (co-supervised with Dr. Carlos Ruíz). Ph.D. in Computer Science, ITESM - Morelos (6/12/1997)

M.Sc.:

1. Ricardo Bentez Jimnez. *Aprendizaje supervisado por la Web basado en informacin multi-modal de imagenes*. M.Sc. in Computer Science, co-supervised with Dr. Hugo Jair Escalanate. INAOE (20/11/19).
2. Ana Li Oa Garca. *Deteccin de fallas distribuida usando redes Bayesianas de mltiples secciones*. M.Sc. in Computer Science, co-supervised with Dr. L. Enrique Sucar. INAOE (29/01/19).
3. Esteban Jaramillo. *Mejoramiento de Reconocimiento de objetos, acciones y efectos usando los ofrecimientos probabilsticos de los objetos*. M.Sc. in Computer Science, co-supervised with Dr. Jos Martnez Carranza. INAOE (28/11/18).
4. Arquimides Mndez Molina. *Learning robotic manipulation tasks using relational reinforcement learning and human demonstrations*. M.Sc. in Computer Science, INAOE (13/11/18).
5. Nahúm Sánchez Taxis. *Método para la reducción de auto-codificadores en aprendizaje profundo*. MSc in Computer Science, INAOE. Co-supervised with Dr. L. Enrique Sucar (29/2/16).
6. Ramón Izquierdo Córdova. *Exploración de Ambientes Estructurados para Búsqueda de Objetos con un Robot Móvil usando Información obtenida de Internet*. MSc in Computer Science, INAOE. Co-supervised with Dr. L. Enrique Sucar (24/2/16).
7. Silvestre Valerio Morales Cruz. *Detección y captura de intrusos mediante el modelado y predicción de trayectorias*. MSc in Computer Science, INAOE. Co-supervised with Dr. Enrique Muñoz de Cote (26/2/15).
8. Mallinali Ramrez Corona. *Clasificacin jerrquica multi-etiqueta para estructuras tipo rbol o DAG*. MSc in Computer Science, INAOE. Co-supervised with Dr. L. Enrique Sucar (7/10/14).
9. Patricia Paredes Hernndez. *Coordinador de Sistemas Multiagente en Entornos de Toma de Decisiones Secuenciales*. MSc in Computer Science, INAOE. Co-supervised with Dr. Enrique Muoz de Cote (28/2/14).
10. Yared Sabinas Figueroa. *Early Gesture Recognition with a Dynamic Time Warping Approach (Reconocimiento Anticipado de Gestos Basado en Dynamic Time Warping)*. MSc in Computer Science, INAOE. Co-supervised with Dr. Hugo Jair Escalante (5/11/13).

11. Dulce J. Navarrete. Learning of Visual Concepts based on Multiple Classifiers (*Aprendizaje de conceptos visuales basado en múltiples clasificadores*). MSc. in Computer Science, INAOE (7/11/12)
12. Julio N. Hernández. Hierarchical Multidimensional Classification (*Clasificación Jerárquica Multidimensional*). MSc. in Computer Science, INAOE (30/10/12).
13. Luis Adrián León Alcalá. Learning of task from imitation and human feedback in service robots (*Aprendizaje de Tareas por Imitación y Retroalimentación en Robots de Servicio*). MSc. in Computer Science (co-supervised with Dr. Leopoldo Altamirano), INAOE (10/2/12).
14. Jaime R. Ruíz. Extraction of features invariant to illumination changes for the analysis of human behavior (*Método de extracción de características invariante a cambios de iluminación para el análisis de comportamiento humano*). MSc. in Computer Science (co-supervised with Dr. Leopoldo Altamirano), INAOE, (7/12/11).
15. Javier Cabanillas Champac. Searching objects in known environments considering perceptual limitations of a mobile robot (*Búsqueda de objetos en ambientes conocidos considerando las limitaciones perceptuales de un robot móvil*). MSc. in Computer Science, INAOE (22/2/11).
16. Ana Cecilia Tenorio. Instructing a robot to perform tasks with on-line voice feedback (*Instrucción de Tareas a un Robot con Retroalimentación en Línea Proporcionada por Voz*). M.Sc. in Computer Science (co-supervised with Dr. Luis Villaseñor), INAOE (8/12/10).
17. Javier Herrera Vega. Robot localization in topological maps with visual information (*Localización de Robots en Mapas Topológicos con Información Visual*). Co-supervised with Dr. Abraham Sánchez López. MSc in Computer Science, BUAP. (12/10/10).
18. Ana Cristina Palacios. Cooperative concept learning in multi-robot systems (*Aprendizaje Cooperativo de Conceptos para Sistemas Multi-Robot*). Co-supervised with Dra. Angélica Muñoz Meléndez. MSc in Computer Science, INAOE (20/11/09).
19. Julio C. Hernández. Relational reinforcement learning with continuous actions (*Aprendizaje por refuerzo relacional con acciones continuas*). MSc in Computer Science, INAOE (17/11/09).
20. Margarita Rossette. Ant-colony optimization-based methods for the protein folding problem (*Métodos basado en optimización por colonia de hormigas aplicados al modelo hidrofóbico-polar del plegamiento de proteínas*). Co-supervised with Dr. Jesús A. González. MSc in Computer Science, INAOE (11/02/09).

21. Roger Luis Velázquez. Transfer learning in bayesian networks (*Aprendizaje por transferencia de redes bayesianas*). Co-supervised with Dr. L. Enrique Sucar. MSc in Computer Science, INAOE (15/01/09).
22. Claudia Cruz. Face recognition based on invariant characteristics (*Reconocimiento de rostros basado en características invariantes*). Co-supervised with Dr. L. Enrique Sucar. MSc in Computer Science, INAOE (14/01/09).
23. Atlántida Sánchez. Synthetic generation of instances for imbalanced classes (*Generación de Instancias Sintéticas para Clases Desbalanceadas*). Co-supervised with Dr. Jesús A. González. MSc in Computer Science, INAOE (20/10/08).
24. Olmo Zavala Romero. Semi-supervised classification with dynamic weights applied to images and remote sensing. *Clasificación Semi-Supervisada con Pesos Dinámicos Aplicada a Imágenes de Percepción Remota*. Co-supervised with Dr. Leopoldo Altamirano. M.Sc. in Computer Science, INAOE (26/2/2008).
25. Heidy Marisol Marin Castro. Automatic Labeling of images using a semi-supervised ensemble. *Etiquetado Automático de Imágenes Digitales Mediante un Algoritmo de Ensamble Semi-Supervisado*. Co-supervised with Dr. L.E. Sucar. M.Sc. in Computer Science, INAOE (7/2/2008).
26. Octavio Gómez Ramos. Segmentation of Multispectral Satellite Images based on Seeded Region Growing and Instance-Based Learning. Co-supervised with Dr. Jesús A. González. M.Sc. in Computer Science, INAOE (1/2/2008).
27. Michel García García. Reinforcement learning and value iteration: two approaches to obtain optimal policies in the pursue-evasion problem in real robots *Aprendizaje por refuerzo e iteración de valor: dos enfoques para obtener políticas óptimas en el problema de persecución-evasión en robots reales* (co-supervised with Dr. L. Enrique Sucar). M.Sc. in Computer Science ITESM - Cuernavaca(11/05).
28. Sergio Hernández Alamilla. Navigation of a mobile robot in indoor environments using natural landmarks. (*Navegación de un Robot Móvil en Ambientes Interiores Usando Marcas Naturales del Ambiente*). M.Sc. in Computer Science, ITESM - Cuernavaca (04/11/05).
29. Víctor Manuel Jacquez Leal. Map Building and Simultation Localization in Mobile Robots. (*Construcción de Mapas y Localización Simultánea con Robots Móviles*). M.Sc. in Computer Science, ITESM - Cuernavaca (04/11/05).
30. Zenón Flores Loredo. Fault Diagnosis for Gas Turbines. (*Sistema de Diagnóstico de Fallas para Unidades Generadoras Turbogas*), (co-supervised with Dr. Pablo Ibargüengoytia). M.Sc. in Computer Science, ITESM - Cuernavaca (29/11/04).

31. Alfonso Estrada Díaz. Progressive Sampling: NSC. (*Muestreo progresivo: NSC*). M.Sc. in Computer Science, ITESM - Mexico City (24/06/04).
32. Blanca Alicia Vargas Govea. Learning of student models. (*Aprendizaje de modelos de estudiantes*), (co-supervised with Dr. Rafael Morales). M.Sc. in Computer Science, ITESM - Cuernavaca (12/02).
33. José María Vega Ramos. Learning of Musical Grammars. (*Aprendizaje de gramáticas musicales*). M.Sc. in Computer Science, ITESM - Cuernavaca (12/02).
34. Nelson Pedroza Estrada. Knowledge Discovery on data from a telephone company. (*Descubrimiento de conocimiento en los datos de una empresa de telefonía*). M.Sc. in Information Technology, ITESM - Cuernavaca (15/06/02).
35. José Luis Merino Gutiérrez. Application of Data Mining tools on a medical database of colageno and trombosis. (*Aplicación de Herramientas de Minería de Datos en un Base de Datos Médica sobre Enfermedades del Colágeno y Trombosis*). M.Sc. in Information Technology, ITESM - Cuernavaca (17/06/02).
36. María Irasema Cruz Pérez. Atmospheric contaminant's prediction in Mexico City using knowledge discovery on databases. (*Predicción del Nivel de Contaminación Atmosférica en la Ciudad de México, utilizando Descubrimiento de Conocimiento en Bases de Datos*). M.Sc. in Information Technology, ITESM - Cuernavaca (21/06/2002).
37. Karla Iliam Jimenez Martínez. Knowledge representation of business models for modification and integration of information systems. (*Representación de Procesos de Negocios para Modificación e Integración de Sistemas de Información*), (co-supervised with Dr. Andrés Rodríguez). M.Sc. in Information Technology, ITESM - Cuernavaca (11/02/02).
38. Dulce María Heredia Guzmán. Knowledge discovery of road accidents. (*Descubrimiento de Conocimiento en Datos de Accidentes Carreteros*), (co-supervised with Dr. Andrés Rodríguez), M.Sc. in Information Technology, ITESM - Cuernavaca (23/08/01).
39. Rogelio Ferreira. Learning of navigation rules for mobile robots. (*Aprendizaje de Reglas de Navegación para Robot Móviles*), M.Sc. in Computer Science, ITESM - Morelos (30/11/1998).
40. Daniel Ramos. Development of a graphycal interface for compositional modelos for engineering. (*Desarrollo de una Interfaz Gráfica para Composición de Modelos para Ingeniería*). M.Sc. in Computer Science, ITESM - Morelos (8/12/1998)

41. Víctor Zamudio. Probability reasoning in Bayesian networks using stochastic optimization techniques. (*Propagación de Probabilidades en Redes Bayesianas Mediante Técnicas de Optimización Estocástica*), (co-supervised with Dr. Enrique Sucar). M.Sc. in Computer Science, ITESM - Morelos (22/5/1998).
42. María de Jesús Vergara. Automatic generation of problems for civil engineering procedures. (*Generación Automática de Problemas para Procedimientos de Ingeniería Civil*), (co-supervised with Dr. Pablo de Buen). M.Sc. in Computer Science, ITESM - Morelos (5/5/1997).
43. Verónica Hernández. Knowledge discovery system for databases. (*Sistema de Descubrimiento de Conocimiento en Bases de Datos*). M.Sc. in Computer Science, ITESM - Morelos (12/1995).
44. Alma Ríos Flores. Genetic-based algorithm for finding classification rules. (*Sistema Basado en Algoritmos Genéticos para Encontrar Reglas de Clasificación*). M.Sc. in Computer Science, ITESM - Morelos (6/1995).
45. Ma. Berenice Gómez Ruíz. Qualitative Simulation. (*Simulación Cualitativa*). M.Sc. in Computer Science, ITESM - Morelos (6/1995).
46. Iliana Parra. Diagnosis of physical systems using a constraint propagation mechanism. (*Diagnóstico de sistemas físicos a través de un mecanismo de propagación de restricciones*). M.Sc. in Computer Science, ITESM - Morelos (6/1995).
47. Renaut Zorola Villareal. Construction of a hybrid and integrated tool for the development of expert systems. (*Elaboración de una Herramienta Híbrida e Integrada para el Desarrollo de Sistemas Expertos*). M.Sc. in Computer Science, ITESM - Morelos (12/1988).

B.Sc.:

- Mireya García Rios. Application of a symbolic manipulation environment. (*Aplicación de un Ambiente de Manipulación Simbólica*). Universidad Autónoma de Nuevo Leon (12/1988).

TEACHING ACTIVITIES

- Deep Reinforcement Learning. As part of the Diploma course on Deep Learning. Consorcio de Inteligencia Artificial (7/6/19).
- Introduction to Artificial Intelligence and Reinforcement Learning. Winter school on Artificial Intelligence, Consorcio de IA, 7 de febrero de 2018, CIMAT, Guanajuato.

- Reinforcement Learning, Tutorial as part of the 9th. Mexican Conference on Pattern Recognition, 24 de junio de 2017, Huatulco, Mexico.
- *Machine Learning Techniques* as part of the *UbiHealth Summer School*, INAOE, Puebla (24/5/16).
- *Machine Learning for Smartphone Data* as part of the *UbiHealth Winter School*, Create-Net, Trento (31/3/16).
- *Introduction to High Level Analysis* within the *Winter School on Ubiquitous Computing*, INAOE (9/1/14).
- *Robot Learning* within the *Summer School on Images and Robotics* (SSIR-2009), INAOE (7/12/09).
- Several courses related to Machine Learning, Data Mining and Artificial Intelligence at undergraduate (ITESM) and graduate level (both master and PhD) at ITESM and INAOE.
- Instructor of the module *Inteligencia Computacional II* within the *Diplomado en Tecnologías de Información*, Consejo de Seguridad Pública del Gobierno del Estado de Campeche, Campeche. Del 12 al 16 de diciembre de 2011.
- Tutorial on Data Mining at the National Conference in Computer Science (*Encuentro Internacional de Ciencias de la Computación*) (ENC-01), Aguascalientes, September, 2001, and also at the conference *AMIGOS-2002: Cooperación para la Administración de Conocimiento*. Universidad de las Américas, Puebla, february, 2002.
- Instructor del Diplomado “Sistemas Basados en Conocimiento” for PEMEX, Villahermosa, Tabasco, 1998.
- Instructor del Diplomado “Minería de Datos” for PEMEX, Villahermosa, Tabasco, 1998.
- Tutorial on *Planning under Uncertainty with Markov Decision Processes*, as part of the Mexican International Conference on Artificial Intelligence (MICAI-2006), in conjunction with Dr. L. Enrique Sucar. (13/11/06 – 17/11/06).

INVITED TALKS

International Forums

1. Panel on: Education 4.0: Present and future of learning: challenges and opportunities. Foro Internacional: Innovación, Educación Superior e Industria 4.0, UNESCO. León, Guanajuato, 29 de agosto de 2018.

2. Towards Autonomous Robots. Universidad de Pars 13. Pars, Francia, 5 de julio de 2018.
3. Finding Nemo (and other things). Artificial Intelligence Research Institute (IIIA). Barcelona, Espaa, 23 de julio de 2018.
4. Finding Nemo (and other things). INRIA - Institut de Recherche en Informatique et Systmes Alatoires (IRISA). Rennes, Francia, 13 de julio de 2018.
5. The Child Robot. Keynote speaker. Mexican International Conference on Artificial Intelligence (MICAI), 26 de octubre de 2017, Ensenada, Baja California Norte, Mxico.
6. Finding (and recognizong) Nemo (and other things). Keynote speaker. Mexican Conference on Pattern Recognition, 22 de junio de 2017, Huatulco, Mxico.
7. The Apprentice Robot. Fifth International Workshop on Knowledge Discovery, Knowledge Management and Decision Support (EUREKA 2015). 24 de abril de 2015.
8. Predicting the state mood of bipolar patients through smartphones. Bogazici University, Research Seminar. 9 de octubre de 2014.
9. Predicting the state mood of bipolar patients through smartphones. CREATE-NET Research Seminar. 2 de Octubre de 2014.
10. Teaching a Robot how to Perform New Tasks. Microsoft Reseach Latin American Faculty Summit. Riviera Maya, 23 of May, 2012.
11. Teaching a Robot to Perform New Tasks though Imitation and Guidance. Department of Knowledge Engineering, Maastricht University, The Netherlands, 27 of March, 2012.
12. Bayesian Chain Classifiers, Faculty of Computer and Information Science, University of Ljubljana, 29 of March, 2012.
13. Teaching a Robot How to Perform Tasks, Faculty of Computer and Information Science, University of Ljubljana, 28 of June, 2011.
14. Teaching a Robot How to Perform Tasks, School of Electrical Engineering and Computer Science, Oregon State University, 28-29 of October, 2010.
15. Service Robots. Art Communication and Technology ACT-2007. CIMAT, 23 of November, 2007.
16. Abstraction and Guidance for Scaling-up Reinforcement Learning. NSF Workshop and Outreach Tutorials on Approximate Dynamic Programming (NSF ADP 2006), April 3th., 2006.

17. Progressive Sampling and Feature Selection: a way to deal with VLDB. Seminar organized by LAFMI. UDLA, 13th. of December, 2005.
18. Relational Reinforcement Learning for Mobile Robots. March 17th., 2005. 2nd. German-Mexican Workshop on Information Technologies. Berlin, Germany.
19. Workshop on Adaptability in Multi-Agent Systems, The First RoboCup Australian Open 2003 (AORC-2003), Sydney, 31 January 2003
20. Congreso Internacional de Ingeniería de Sistemas y Ciencias de la Computación, 14-18th. of November, 2000. Escuela de Ingeniería de Sistemas e Informática, Universidad Industrial de Santander, Bucaramanga, Colombia.
21. II Congreso Internacional de Profesionales en Informática y Computación, 27th. and 28th. of May, San José, Costa Rica, 1999.

National Forums

1. Introduccion al Aprendizaje Computacional. Dentro de la Escuela de otoo sobre tcnicas y herramientas en inteligencia artificial en apoyo a la investigacin sobre envejecimiento saludable. 5 de noviembre de 2019, Tonantzintla, Puebla.
2. Inteligencia Artificial: Mitos y Realidades, dentro del III Congreso Intenacional de Innovacin, Tecnologia y Sustentabilidad 2019 (CIITyS), Instituto Tecnolgico de Acapulco, 11 de octubre de 2019, Acapulco, Guerrero.
3. Inteligencia Artificial: Mitos y Realidades, dentro del VII Seminario Nacional de Aprendizaje e Inteligencia Artificial, 17-20 de septiembre, 2019, BUAP, Puebla.
4. Qu es y qu no es Inteligencia Artificial? dentro del Foro Inteligencia Artificial para el Bienestar, Foro Consultivo Cientfico y Tecnolgico (FCCyT), 22 de agosto de 2019.
5. Inteligencia Artificial y Reconocimiento de Patrones, 17 de junio de 2019. Conferencia Magistral dentro del V Coloquio de la Maestra en Ciencias de la Computacin, UAM-Azcapotzalco, Ciudad de Mxico.
6. Celulares para la Salud, 13 de junio de 2019. Conferencia invitada dentro del X Congreso Nacional de Tecnologia Aplicada a Ciencias de la Salud, Puebla.
7. Artificial Intelligence in Robotics. Conferencia Invitada dentro del evento *Autonomous Vehicles and Artificial Intelligence*. Universidad Iberoamericana - Puebla, 13 de septiembre de 2018.
8. El Nio Robot. Congerencia Invitada. 1er. Congreso INGENIUM. ITESM - Campus Puebla. 12 de abril de 2018.

9. Cuando el Destino nos Alcance. Congerencia Invitada. TALENTLAND, Guadalajara, Jalisco. 5 de abril de 2018.
10. El Nio Robot. Congerencia Magistral. Congreso Internacional de Innovacin, Tecnologia y Sustentabilidad (CIITyS) 2017, Acapulco, 13-17 de noviembre de 2017.
11. The Child Robot. Conferencia Magistral. ROPEC 2017. IEEE Autumn Meeting in Power, Electronics and Computing, IEEE Seccin Centro Occidente. 7-9 de Noviembre, Ixtapa, Zihuatanejo.
12. Moderador de Mesa Redonda “Encuentro Investigadores-Empresarios”. El V Seminario Nacional de Aprendizaje e Inteligencia Computacional. 8 de Septiembre de 2017. Lagos de Moreno, Jalisco.
13. Buscando a Nemo (y a otras cosas). Conferencia Plenaria durante el V Seminario Nacional de Aprendizaje e Inteligencia Computacional. 7 de Septiembre de 2017. Lagos de Moreno, Jalisco.
14. Buscando a Nemo. II Taller de Mecatrnia Moderna, Universidad Politcnica de Tlaxcala, 6 de julio de 2017.
15. Learning to Fly by Transfer and Reinforcement Learning. International Workshop on Vision and Control of Autonomous Drones. 23 de febrero de 2017, INAOE, Mxico.
16. *Buscado (y aprendiendo a reconocer) a Nemo (y a otras cosas)*. January 13th. 2017, as part of the Winter School on Robotics, UPAEP - Federacin Mexicana de Robtica, Puebla.
17. Member at a Discussion Forum on: *Redes Elctricas Inteligentes - Oportunidades de Colaboracin*, at the IV Seminario Nacional de Aprendizaje e Inteligencia Computacional, UMSNH, September 14th. 2016, Morelia Michoacan.
18. *Celulares para la Salud*, as part of the IV Seminario Nacional de Aprendizaje e Inteligencia Computacional, UMSNH, 13 de septiembre de 2016, Morelia Michoacan.
19. Conferencia magistral dentro del 8 Congreso Mexicano de Inteligencia Artificial (COMIA-2016), 24 de mayo de 2016, Sta. Ma. Tonantzintla, Puebla.
20. Conferencia magistral: El robot aprendiz. En el marco de la Celebracin del 51 Aniversario de la Facultad de Ingeniera Elctrica, de la Universidad Michoacana de San Nicols de Hidalgo, 21 de abril de 2016, Morelia, Michoacn.
21. Conferencia magistral: El robot aprendiz. Dentro del XXVI Simposium Internacional Tecnotrnia 2016 del Instituto Tecnolgico de Morelia, 20 de abril de 2016, Morelia, Michoacn.

22. Conferencia magistral: El robot aprendiz. Dentro del 3er Seminario Nacional de Aprendizaje e Inteligencia Computacional. 22 de octubre, 2015.
23. Participacin en la mesa redonda: Pasado, Presente y Futuro de los Sistemas Inteligentes: Una revisin de si tecnologa, implicaciones sociales y riesgos potenciales de su desarrollo. Dentro del 3er Seminario Nacional de Aprendizaje e Inteligencia Computacional. 23 de octubre, 2015.
24. El Robot Aprendiz. Pltica invitada dentro el Torneo Mexicano de Robtica, 2015 (<http://www.tmr2015.mx/programa.php>).
25. El Robot Aprendiz. Ciclo de Conferencias Magistrales, Red Temtica de Tecnologas de la Informacin y Comunicacin, Cd. Victoria, Tamaulipas. 24 de noviembre de 2014.
26. Aprendiendo de la Web. Dentro del Seminario Internacional: Prioridades Econmicas y Redes de Colaboracin. Dise, desarrollo y aplicacin de TIC. Universidad Autnoma Metropolitana (UAM) - Cuajimalpa. 18 de Noviembre de 2014.
27. El Robot Aprendiz. Congreso Nacional de Ciencias de la Computacin (CONACIC 2014). BUAP. 31 de octubre de 2014.
28. Robots: Estado Actual y Perspectivas. Supernova, BUAP. 20 de mayo de 2014.
29. *Ensamblajes y Redes Bayesianas Dinmicas*. Taller *NetSec*, 16 y 17 de diciembre, 2013. ITESM - Campus Estado de Mxico.
30. *El Robot Aprendiz*. Escuela de Invierno de Robtica, 12 de diciembre de 2013, INAOE.
31. *Aprovechando el Conocimiento para Resolver los Problemas Nacionales*. Foro Consultivo Cientfico y Tecnolgico, A.C. 19 de julio de 2013.
32. *Redes Temticas (RedTIC) Hacia dnde va la Ciencia en Mxico*. Taller Latinoamericano de Tratamiento Automtico del Lenguaje, 3-5 Julio, 2013.
33. *Enseñándole a un Robot a Realizar Tareas*, 13-14 de junio de 2013, Primer Seminario de Aprendizaje e Inteligencia Computacional.
34. Aprendizaje por Imitacin en Robots Humanoides. Congreso Nacional de Investigacin Cientfica Bsica 2012 "Casos de xito", 23 de noviembre de 2012.
35. Taller Anual de Teora de la Computacin, 2012 Ao de Turing. IIMAS - UNAM. *Educando al Nio Computacional de Turing*, 16 de noviembre de 2012.

36. Plática invitada dentro del *Congreso Nacional de Tecnología Industrial*, Universidad Tecnológica Metropolitana, Mérida, Yucatán, 27 de abril de 2012.
37. Participación en el panel *El Futuro de la Informática como Disciplina*, como parte del Coloquio 2011: Sociedad de la Información en el contexto global, una oportunidad para el desarrollo de México, organizado por la Academia Mexicana de Informática, A.C. (AMIAC), 28 de noviembre de 2011.
38. Participación en el *Panel on Industry and Academia Cooperation* dentro del *ICT-Forum: Mexico-EU cooperation in ICT R&D and Innovation*. 10 de octubre, ITESM – Campus Santa Fe, 2011.
39. Participación en las mesas redondas sobre *Cambio de Percepción de la TI en México*, 11 de mayo de 2011, ITESM-CEM.
40. *Teaching a robot how to perform tasks*. 2º Congreso Mexicano de Inteligencia Artificial (COMIA), Universidad Autónoma de Tlaxcala, 14 de Octubre, 2010.
41. *Service robots: Markovito*. 1ª Semana de Ingeniería en Sistemas Computacionales. Instituto de Estudios Universitarios, Puebla., 26 de Marzo de 2010.
42. Congreso de Ingenierías del ITESM–Campus Puebla (IGNIS 2009), 23 de Octubre, 2009.
43. Videoconferencia en el marco de la inauguración de la sala de juntas del Consejo Estatal de Información y Documentación Científica y Tecnológica del Consejo Quintanarroense de Ciencia y Tecnología, 29 de septiembre de 2009.
44. Conferencista dentro del *Foro Sobre la Perspectiva de la Computación en México*, Cámara de Diputados, 18 de agosto de 2009.
45. V Congreso de Informática, Robótica e Inteligencia Artificial, Puerto Vallarta, 11 de junio de 2009
46. *Abstracción y Guía para Escalar Aprendizaje por Refuerzo*. Plática invitada para el Seminario de Investigación 2009, CINVESTAV, Tamaulipas, 2 de abril de 2009.
47. Conferencia Magistral dentro del congreso: *CIC 2008: 17th International Conference on Computing*, Ciudad de México, 3 de diciembre de 2008.
48. Plática invitada dentro de la *Semana de Inteligencia Artificial 2008*, Universidad Veracruzana, Xalapa, 27 de noviembre de 2008.
49. Conferencia Magistral dentro del congreso: *50 Años de la Computación en México*, 12 de noviembre de 2008.

50. Conferencista invitado al Congreso Internacional de Informática y Sistemas Computacionales. Instituto Tecnológico de Ciudad Guzmán. 3 de octubre de 2008.
51. Participación en la Mesa Redonda: *La Situación Actual de la Computación en México* como parte de los 25 años de los Programas de Computación del CINVESTAV-IPN. 4 de septiembre de 2008.
52. Experiences on predicting mechanical properties of steel tubes. Data-Mining Workshop, MICAI, Aguascalientes, November 5th., 2007.
53. First Meeting on Robotics. Benemérita Universidad Autónoma de Puebla, Puebla, March 21st., 2007.
54. *4o. Congreso Internacional de Sistemas Computacionales*. Instituto Tecnológico de Veracruz. 18-20th. of August, 2004.
55. *Tercer Encuentro Nacional de Capítulos Estudiantiles de la ACM*, Cd. Madero, Tamaulipas, May 14th., 2004.
56. *Futuro de las Ingenierías*. ITESM - Campus León, León, Guanajuato, 15th. of April, 2004.
57. *Congreso de Mecatrónica*, ITESM - Campus Ciudad de México, September 12th., 2003.
58. *Quinto Taller Internacional de Minería de Datos*, 21st.-22nd. of August, 2003, Pachuca, Hidalgo,. Centro de Investigación en Computación del I.P.N. y Centro de Investigación en Tecnologías de Información y Sistemas de la UAEH.
59. Instituto Tecnológico de Tapachula, May 6th., 2002.
60. AMIGOS-2002: Cooperación para la Administración de Conocimiento. Universidad de las Américas, Puebla, 21-23rd. of February of 2002.
61. VI Simposium Internacional de Sistemas y Computación, 28-30th. of November, 2001. Instituto Tecnológico de Acapulco.
62. Primer Congreso de Ingeniería en Sistemas Computacionales: Evolución Futurista. Instituto Tecnológico de Nuevo León, November 16th., 2001.
63. Sistemas de Información Geográfica y Percepción Remota como Herramientas de Análisis Espacial. Universidad Autónoma del Estado de Morelos, October 18th., 2001.
64. Tercer Taller Internacional de Minería de Datos, Octubre 2nd., 2001, CIC - Universidad Panamericana.
65. Primer Día ISC, 3rd. of April of 2001, Tec de Monterrey - Cuernavaca, Morelos.

66. VII Semana Académica: Tecnologías de Vanguardia, 29–31st. of March, 2001, Universidad de las Americas en Puebla.
67. Congreso Virtual Cómputo 2000. 16-20th. of October, 2000. Universidad Nacional Autónoma de México.
68. Congreso Regional de Ciencias de la Computación, 18-20th., of October, 2000, Universidad Autónoma de Yucatán, Mérida.
69. II Taller Internacional de Minería de Datos (MINDAT-2000), 26-29th. of September, 2000, Centro de Investigación en Computación (CIC) and Colegio de Postgraduados.
70. Primer Foro: Computación, de la teoría a la práctica. May, 1999.
71. II Congreso Internacional de Electrónica. ITESM - Campus Guadalajara, October, 1998.
72. VII Seminario Internacional de Informática. Universidad Autónoma de Tamaulipas, 7–9th. of October, 1998.
73. VII Semana de la Computación, Benemérita Universidad Autónoma de Puebla, 17–19th. of November, 1997.
74. Simposium Internacional de Computación CIC–97, Instituto Politécnico Nacional, 12-14th. of November, 1997.
75. Conferencia de Investigación dentro del XXX Congreso Nacional de la Sociedad Matemática Mexicana, 28th. of September - 3rd. of October, 1997.
76. Invited talk at the seminar: “Razonamiento e Inferencia Automática y sus aplicaciones a la Inteligencia Artificial”, Centro de Investigación en Computación (CIC) - Instituto Politécnico Nacional, 3rd. of July, 1997.
77. Escuela de Música de la Universidad de Guanajuato and Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Gto., 1997, as part of the festival and contemporary music conference: “Callejón del Ruído: Composición, Ideas y Tecnología”, 2nd.–7th. of June, 1997.
78. Instituto Tecnológico Autónomo de México (ITAM) as part of the VIII Semana de ingeniería, 21st.-25th. of October, 1996.
79. Invited talk at the XXIX Congreso Nacional de la Sociedad Matemática Mexicana, 6-12th. of October, 1996.
80. Instituto Tecnológico de Cuautla. As part of the 3^a Semana Académica Cultural de Sistemas Computacionales e Instrumentación Industrial. March, 1995.

81. Instituto Tecnológico de Acapulco. As part of the XIX Semana de Ingenierías, 25th. of April, 1994.
82. School of Music at the Universidad de Guanajuato y el Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Gto., 26th. of March, 1994, as part of the festival and contemporary music conference: “Callejón del Ruído: Composición, Ideas y Tecnología”.
83. Invited talk at the XXVI Congreso Nacional de la Sociedad Matemática Mexicana, Morelia, Michoacán, 16th. of October, 1993.
84. Laboratorio Nacional de Informática Aplicada (LANIA) as part of “Lógica Aprendizaje y Sistemas Cooperativos”, Jalapa, Ver., April, 1993.
85. Universidad Autónoma de Nuevo León – as part of the International Talks on Information Systems, Monterrey, N.L., April, 1993.

Invited Talks at Other Institutions

1. Inteligencia Artificial: Mitos y Realidades. Webinar organizado por el Instituto Nacional de Electricidad y Energías Limpias (INEEL), 18 de octubre de 2019, Cuernavaca, Morelos.
2. Inteligencia Artificial, 30 de mayo de 2019. Casa de Cultura Tlanczcalli, Secretara de Arte, Cultura y Turismo Cultural, Ayuntamiento de San Andrés Cholula, Puebla.
3. Hacia Robots ms Autnomos, 1 de mayo de 2019. Universidad Veracruzana - Xalapa, 25 Aniversario de la Maestra en Inteligencia Artificial.
4. Mesa Redonda sobre Inteligencia Artificial, 2 de mayo de 2019. Universidad Veracruzana - Xalapa, 25 Aniversario de la Maestra en Inteligencia Artificial.
5. Inteligencia Artificial, 25 de abril de 2019. Universidad Iberoamericana - Campus Puebla.
6. Hacia Robots Ms Autnomos, 11 de abril de 2019. Semana IMT 2019 Ing. Mecatrónica. ITESM-Puebla.
7. Inteligencia Artificial, 10 de abril de 2019. Alianza Francesa - Puebla.
8. Hacia Robots ms Autnomos, 22 de febrero de 2019. Laboratorio de Robótica Cognitiva, Centro de Investigación en Ciencias, Universidad Autónoma del Estado de Morelos.
9. Aprendizaje por refuerzo transfiriendo conocimiento. Seminario del Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM) - Campus Estado de México, 28 de agosto de 2015.

10. Aprendizaje por refuerzo transfiriendo conocimiento. Seminario del Centro de Investigación en Matemáticas (CIMAT), Guanajuato, 25 de marzo de 2015.
11. Aprendizaje por refuerzo transfiriendo conocimiento. Seminario Departamental del Centro de Investigación y de Estudios Avanzados (CINVESTAV) del IPN, Ciudad de México, 23 de marzo de 2015.
12. El Robot Aprendiz. Ciclo de Conferencias de la Universidad de la Américas Puebla (UDLAP). 27 de noviembre de 2014.
13. *Educando al Nio Computacional de Turing*, 13 de marzo de 2013, Centro de Investigación en Matemáticas, A.C. (CIMAT).
14. *Current state of the Conacyt's thematic network on ICTS*, 20 de junio de 2010, IPN, ESCOM.
15. *Abstracción y Guía para Escalar Aprendizaje por Refuerzo*. Plática invitada dentro el Seminario Departamental 2009, CINVESTAV, Ciudad de México, 29 de junio de 2009.
16. Relational Reinforcement Learning. CIMAT, November 23th., 2007.
17. Invited talk at the Instituto Tecnológico de Ciudad Madero, Tamaulipas, May 31st., 2007.
18. *Jueves Computacionales* ITESM - Campus Cuernavaca, Ciudad de México and Estado de México, 31st. of March, 2005.
19. Seminar at the *Instituto Potosino de Investigación Científica y Tecnológica* (IPICYT). November 19th., 2004.
20. Seminar at the *Universidad Michoacana de San Nicolas de Hidalgo*, Postgraduate Studies Division, 4th. of June, 2004.
21. Seminar at the University of New South Wales (UNSW), January, 2003.
22. Seminar at the University of New South Wales (UNSW), June, 2003.
23. Research seminars, *Centro de Investigación en Computación* (CIC) - IPN, August 29th., 2003.
24. Seminar at Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE), April 10th., 2002.
25. Research seminar, Centro de Investigación en Computación (CIC) - IPN, November 30th., 2001.
26. Universidad Michoacana de San Nicolás de Hidalgo, 1st. of June, 2001.
27. Research seminar, Centro de Investigación en Computación (CIC) del IPN, 18th. of February, 2000.

28. Instituto Tecnológico y de Estudios Superiores de Monterrey - Campus Estado de México, 28th. of November, 1996.
29. Research seminar, University of Texas at Austin, July, 1996.
30. Instituto Tecnológico de Estudios Superiores de Monterrey (ITESM) – Morelos. Panel on Artificial Intelligence, 3rd. of December, 1993.
31. Instituto Tecnológico de Estudios Superiores de Monterrey (ITESM) – Morelos. 12th. of November, 1993.
32. Instituto Tecnológico de México (ITAM) – as part of the talks organized by the Sociedad Mexicana de Inteligencia Artificial (SMIA), México, D.F., January, 1993.
33. Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Gto., March, 1993.

INTERNATIONAL RESEARCH VISITS

- CREATE-NET, Italy, with Prof. Oscar Mayora, del 19 al 22 de julio de 2016.
- CREATE-NET, Italy, with Prof. Oscar Mayora, del 29 dfe marzo al 8 de abril de 2016.
- CREATE-NET, Italy, with Prof. Oscar Mayora, del 12 de septiembre al 4 de noviembre de 2014.
- Bogazici University, Estambul, Turkey, with Prof. Bert Arnrich del 4 al 11 de noviembre de 2014.
- CREATE-NET, Italy, with Prof. Oscar Mayora, September 13th. - 28th., 2013.
- Faculty of Computer and Information Science, University of Ljubljana, Slovenia, Prof. Ivan Bratko, 28 of Marzo to 1st. of April, 2012.
- Department of Knowledge Engineering, Maastricht University, The Netherlands, Dr. Kurt Driessens, 26-27 of March, 2012.
- CREATE-NET, Italy, with Prof. Oscar Mayora, 5-15 of September, 2012.
- Faculty of Computer and Information Science, University of Ljubljana, 27-29 of June, 2011.
- School of Electrical Engineering and Computer Science, Oregon State University, Dr. Alan Fern, 28-29 of October, 2010.
- Profesor visitante de la Universidad de New South Wales, Sydney, Australia. Jul. 2002 – Jun. 2003.

- Investigador visitante, Nuclear Power Division, Electric Power Research Institute (EPRI), Palo Alto, Calif., E.U.A. Marzo 1986 – Ago. 1986.

Reviewer

COMMITTEES:

- Associate Editor dentro del Track de Pattern Recognition and Machine Learning de International Conference on Pattern Recognition (ICPR), 2016.
- Area Chair (Machine Learning) del Congreso Iberoamericano de Inteligencia Artificial (IBERAMIA), 2016.
- Co-Chair del IEEE-RAS International Conference on Humanoid Robots (Humanoids), 2016.
- Member of the Editorial Board of the *International Journal of Applied Intelligence* (desde 2012).
- Member of the Editorial Board of the *Transactions on Machine Learning and Data Mining* (desde 2013).
- Associate Editor of the journal *Inteligencia Artificial*. Revista Iberoamericana de Inteligencia Artificial.
- Invited Editor of *Komputer Sapiens* special issue of Machine Learning, July-December, 2011.
- Member of the Editorial Board of *Komputer Sapiens*.
- Member of the Editorial Board of the weekly supplement “@rroba” from the newspaper La Jornada de Oriente (2008).
- Area Chair in Machine Learning from the International Joint Conference on Artificial Intelligence - IJCAI (2003).
- Member of the program committee of the Workshop: Reasoning with Uncertainty in Robotics (RUR-03), as part of the International Joint Conference on Artificial Intelligence (2003).
- Program Chair, Mexican International Conference on Artificial Intelligence (MICAI), 2008.
- Conference Chair, Reunión Nacional de Inteligencia Artificial (RNIA), 1995.
- Reviewer of papers in several journals such as: *Machine Learning Journal*, *International Journal of Applied Intelligence*, *Knowledge and Information Systems (KAIS): An International Journal*, *IEEE Systems, Man and Cybernetics - Part B*, *Computational Intelligence*, *IEEE Intelligent Systems*, *Journal of Computer Science and Technology*, *Computación y Sistemas*,

Biomedical Engineering, Computers & Electronics, Journal of Ambient Intelligence and Smart Environments, Knowledge-Based Systems, Pattern Recognition Letters, etc.

- Reviewer of several national and international conferences, such as: IJ-CAI, ICML, ECML, PKDD, IROS, ICDM, IBERAMIA, ICRA, FLAIRS, MICAI, DaWaK, MCPR, LARS, CIARP, CAEPIA, WCES, ISAI, ENC, RNIA, TREC, AIAR, KDIR, MWPR, SERECPAT, etc.
- Co-editor of the special number in: *Games: Planning and Learning* from the journal: *Computational Intelligence*, 1994.
- External examiner of several BSc., MSc. and Ph.D. theses

PROJECTS:

- Member of the Evaluation Committee of projects from COLCIENCIAS, Colombia, 2016.
- Miembro del Comit Evaluador de proyectos de colaboracin entre Mxico y la Universidad de California (UC-MEXUS), 2015.
- Member of the Reviewing Commission of the Funds for Research on Social Development CONACYT-SEDESOL, 2013.
- Reviewer on project submitted to *Researcher Links* - British Embassy - CONACYT, 2013.
- Reviewer of potential reviewers for CONACYT (RCEA), 2012, 2013, 2014.
- LACCIR - Microsoft projects, 2012
- Project “ALAS-EMS”, from UNAM, 2012
- Project from the University of Maastricht, The Netherlands, Free Competition 2011 EW (Exacte Weternshappen), 2011.
- Projects from FONDECYT, CONICYT - Chile, 2009.
- Research Project from Universidad Jurez Autnoma de Tabasco, 2007.
- Research Projects from NSF-CONACYT and from CONACYT (1997-2000, 2005 a la fecha).
- Research Project between Jalisco State - (2008), Guanajuato State - Conacyt (2003).
- Projects from: CFE-Conacyt (2004)

PROGRAMS:

- Member of the Review Committee of Area VII of the National Researcher’s System (SNI). 2018.

- Member of the Committee for Basic Research projects, CONACyT, 2018.
- Member of the Evaluation Committee of Area VII of the National Researcher's System (SNI). 2015-2017.
- Evaluation Committee of candidates to be part of the Registro CONACYT de Evaluadores Acreditados (RCEA), 2012, 2013, 2014.
- Reviewer of postgraduate programs within the Programa Nacional de Posgrados de Calidad - PNPQ (2011, 2013) and Padrn de Excelencia de CONACyT (1996, 2000, 2001).
- External Reviewer of the Master and PhD programs in Computer Science from Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), 9-10 of July, 2009.
- Reviewer for scholarships in Computer Science from CONACYT (1998, 1999).

External Theses:

- Heikel Yervilla Herrera. Optimal sampling-based motion planning with applications to nonholonomic dynamical systems under visibility constraints and object reconstruction. Examen de doctorado, del programa de Doctorado en Ciencias con Orientación en Ciencias de la Computación. Centro de Investigación en Matemáticas, A.C. (CIMAT). 15 de noviembre de 2019.
- Jos Roberto Cabezas Hernández. Examen de doctorado - posgrado en música, Universidad Nacional Autónoma de México (UNAM). Desde lo intangible: Sistemas computacionales para la creación híbrida audiovisual y transmedia. 19 de octubre de 2018.
- Bárbara Cervantes González. Examen de doctorado (presidente). Tecnológico de Monterrey - Campus Estado de México. A study of feature uniformity on decision tree ensemble classifiers. 23 de noviembre de 2017.
- Jorge Rodríguez Ruiz. Examen de Propuesta Doctoral. ITESM-Campus Estado de México (presidente). 10 noviembre 2016. An incremental update mechanism for one-class Markov chains classifiers.
- Carlos Celemin Paez. Examen de Propuesta de Doctorado en Ingeniería Eléctrica. Universidad de Chile, Facultad de Ciencias Físicas y Matemáticas. 16 de marzo de 2016. A framework for learning continuous actions from corrective advice.
- Rafael Rivera López. Examen Pre-Doctorado, Universidad Juárez Autónoma de Tabasco. Creación de roles de clasificación utilizando metaheurísticas basadas en la física. 4 de octubre de 2016.

- Jos Gabriel Hoyos Gutierrez. Doctorado en Ingenieria Automtica. Universidad Nacional de Colombia, Campus Manizales. 13 noviembre 2015. *Aportes en la generalizacin de habilidades por imitacin de robots.*
- Brbara Cervantes Gonzlez. Propuesta Doctoral en Ciencias Computacionales del ITESM Estado de Mxico, 3 noviembre 2015. *Modelling user interaction for continuous authentication in mobile devices.*
- Roberto Cabezas. Maestra en Msica, Universidad Nacional Autnoma de Mxico. *Afecciones Nmadas: Devenir de la interaccin, el sonido y la imagen*, 2013.
- Edmar Olivares Soria. Maestra en Msica, Universidad Nacional Autnoma de Mxico. *Espacializacin multicanal algortmica: Un modelo terico general con aplicaciones en Supercollider*, 2013.
- Orlando Muz Texzocotla. Maestra en Ciencias y Tecnologas de la Informacin, Universidad Autnoma Metropolitana - Iztapalapa. *Aprendizaje Maquinal Multivalores.*
- Benjamn Moreno Montiel. Maestra en Ciencias y Tecnologas de la Informacin, Universidad Autnoma Metropolitana - Iztapalapa. *Minera sobre grandes cantidades de datos.* Julio, 2009.

Other Academic Activities

Member of Societies

- Founding Member of the Academia Mexicana de Computacin, January, 2015.
- Member of the National Academy of Sciences - Mexico (AMC)
- Member of the Mexican Academy of Informatics (AMIAC)
- Member and founding head of the steering committee of the Red Temática de Tecnologías de la Información y Comunicación (RedTIC)
- Member of the Red Temática de Robótica y Mecatrónica
- Founding Member of the Red Mexicana de Investigacin y Desarrollo en Computacin (REMIDEC)
- Board member of the Mexican Society of Artificial Intelligence (*Sociedad Mexicana de Inteligencia Artificial*) (1993–1995)
- Member of the American Association of Artificial Intelligence (1999-2000)
- Board member of the Mexican Society of Computer Science (*Sociedad Mexicana de Ciencias de la Computación*) (1999-2000).

ORGANIZER OF CONFERENCES

- Track Chair on Machine Learning from the Mexican International Conference on Artificial Intelligence (MICAI), 2017
- Co-organizer of the V Seminario Nacional de Aprendizaje e Inteligencia Computacional, 4 al 8 de octubre de 2017.
- Co-organizer of the First National Seminar on Machine Learning and Computational Intelligence, 13-14 of June, 2013.
- Responsible of RoboCup@Home form the Mexican Tournament on Robotics 2013, 25-27 of April, 2013.
- Organizer of the Annual Meeting of the Red Temtica en Tecnologas de la Informacin y Comunicacin (RedTIC), 2010 and 2011.
- Co-organizer of the Workshop: *Automatic Image Annotation and Retrieval Workshop*, 6-8 of October, 2010, in Tonatzintla, Puebla.
- Co-organizerr of the *Summer School on Image and Robotics - 2009* (SSIR-2009), 7-18 of December, 2009.
- Co-organizer of the workshop: *Los Grandes Retos y Tendencias de las Tecnologías de la Información para México*, 21-22 of May, 2009, in Monterrey, Nuevo León.
- Co-organizer of the workshop: *Los Grandes Retos de Innovación en TIC*, 23 of September, 2009, Mexico City.
- Program Chair del Seventh Mexican International Conference on Artificial Intelligence (MICAI), 2008.
- Workshop Chair del Taller: Data Mining Applications and Current Trends, dentro de MICAI-2007.
- Workshop Chair del Taller: Service Robots, dentro de MICAI-2007.
- Area Chair (Machine Learning) at the International Joint Conference on Artificial Intelligence (2003).
- Co-chair of the Workshop: Reasoning with Uncertainty in Robotics (RUR-03). Como parte del International Joint Conference on Artificial Intelligence (2003).
- Tutorial courses at the *Encuentro Internacional de Ciencias de la Computación* (ENC-01), Aguascalientes, 2001.
- Machine Learning Workshop (*Taller de Aprendizaje*) as part of the *Segundo Encuentro en Computación* (ENC-99), 12th.-15th. of September, Pachuca, Hidalgo, 1999.

- Machine Learning Workshop (*Taller de Aprendizaje*) as part of the *Taller de Inteligencia Artificial* (TAINA-98) of the *Congreso General Computo-98*.
- Machine Learning workshop (*Taller de Aprendizaje*) as part of the *Primer Encuentro en Computación* (ENC-97), Queretaro, Qro., 11th.-13th. of September, 1997.
- President of the Organizing Committee of the *XII Reunión Nacional de Inteligencia Artificial*, 20th.-23rd. of September, Cuernavaca, Morelos, 1995.

Participation in Academic Programs

- Master's and PhD programs in Computer Science at INAOE.
- Master's and Ph.D. programs in Computer Science at ITESM-Morelos.
- Ph.D. program of the University of Salford, U.K. and Instituto de Investigaciones Eléctricas (IIE).

Participation in Other Events

- Co-organizer of the festivities of the 10th. anniversary of the Computer Science programs at INAOE.
- Host researcher of the Summer Research program (*Verano de Investigación*), organized by the Academia Mexicana de Ciencias, Area IV Ingeniería y Tecnología, (2000, 2001, 2004, 2005).
- Participation on a live shows generating music from body movements at Stanford University, California, Estados Unidos, May, 1999, and the *Seventh Biennial Symposium on Arts and Technology at Connecticut College: Minds, Machines and Electronic Culture*. New London, Connecticut, 4th.-7th. of March, 1999.
- Participation in the *Encuentro Internacional de Composición: Callejón del Ruido*, Guanajuato, Gto., June 4th.-6th., with an invited talk and concert with dancers, 1997.
- Participation in a live concert with a dancer and music in the *Semana de Conciertos de Invierno del Centro Nacional de las Artes*, 1996.
- Participation in the *Taller de Educación en Ciencias de la Computación*, organized by CONACyT - National Science Foundation, 20th.-22nd. of March 1996, Xalapa, Veracruz.